DOCUMENT RESUME

ED 088 720 SE 017 576

AUTHOR	Alden, John D.
TITLE	Engineering and Technology Graduates, 1973.
INSTITUTION	Engineers Joint Council, New York, N.Y. Engineering Manpower Commission.
PUB DATE	73
NOTE	80p.
AVAILABLE FROM	Engineering Manpower Commission, Engineers Joint Council, 345 East 47 Street, New York, New York 10017 ($15.00)
EDRS PRICE	MF-$0.75 HC-$4.20
DESCRIPTORS	Accreditation (Institutions); Employment Services; *Employment Trends; *Engineering Education; *Graduate Surveys; *Job Placement; Manpower Needs; Manpower Utilization; Salary Differentials; *Technical Education

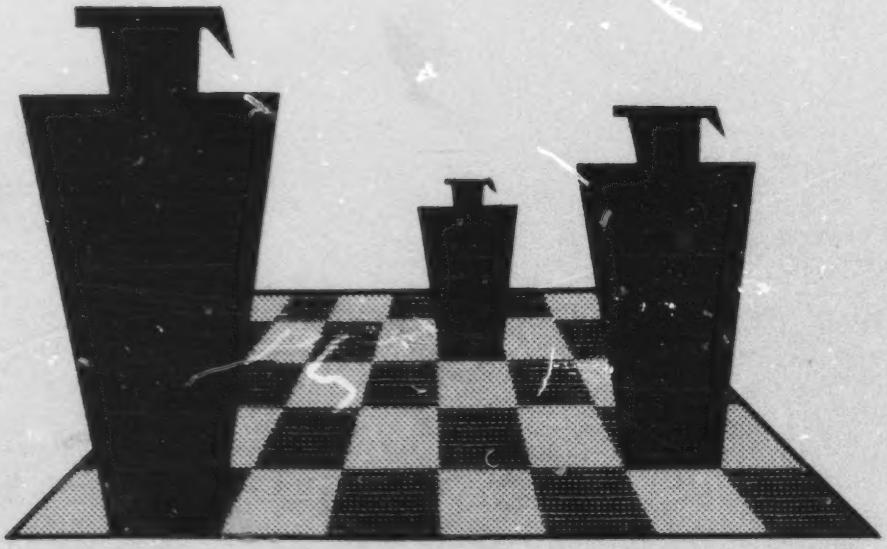
ABSTRACT

This report on the placement status of engineering and technology graduates in 1973 is presented on the basis of survey data obtained from registrars and placement directors of institutions in the U.S. The numbers of graduates were: 43,429 bachelor's, 16,718 master's, 434 engineer, and 3,587 doctor's degree graduates in engineering; (2) 18,316 associate degrees, 4,402 bachelor's, and 21 post-baccalaureate degrees in engineering technology; and (3) 5,004 certificates, 6,481 associate degrees, 39 post-baccalaureate degrees, and 2,076 bachelor's in industrial technology. Analyses are made in connection with placement status at each degree level, major curricula of different job climate, expected graduate shortage, student trends in schools accredited by the Engineers' Council for Professional Development (ECPD schools) and non-accredited schools, starting salaries, and chronological comparison. Job prospects for next year's graduates are reported as good. Graduates of ECPD schools are more likely to continue further study in comparison with non-ECPD school graduates. The strength of the observed demand decreases gradually from bachelor's in engineering to older alumni through bachelor's of engineering technology, associates in technology, master's in engineering, and bachelor's of industrial technology. The lowest group is PhD's. Women graduates average slightly higher salary offers than men at the BS degree level. Blacks and other minority graduates are characterized as in very strong demand. Also included are statistical tables of varying-degree graduates versus institutions and curricula. (CC)

ED 088720

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

ENGINEERING AND TECHNOLOGY GRADUATES 1973



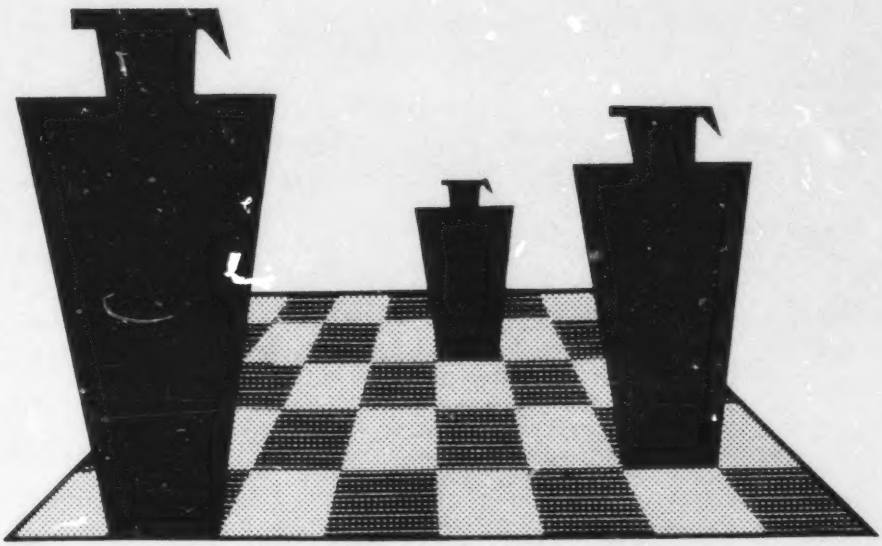
A REPORT BY

ENGINEERING MANPOWER COMMISSION
of
ENGINEERS JOINT COUNCIL
345 East 47th Street, New York, N.Y. 10017

SE 017 376

ED 088720

ENGINEERING AND TECHNOLOGY GRADUATES 1973



A REPORT BY

ENGINEERING MANPOWER COMMISSION

of

ENGINEERS JOINT COUNCIL

345 East 47th Street, New York, N.Y. 10017

ENGINEERS JOINT COUNCIL

Engineers Joint Council (founded in 1941 and incorporated in 1958) is a federation of engineering societies whose general objective is to advance the art and science of engineering in the public interest.

In furtherance of this general objective the Council shall:

a) Provide for regular and orderly communications among its member societies.

b) Act as an advisory and coordinating agency for member society activities, as mutually agreed.

c) Organize and conduct forums for the consideration of problems of expressed concern to member societies.

d) Identify needs and opportunities for service in the engineering community and inform the concerned engineering institutions.

e) Recommend appropriate programs of studies and research to engineering institutions and especially to member societies.

f) Undertake, in accordance with policies mutually agreed to, specific activities or projects that the member societies acting individually could not accomplish as well.

g) Represent the member societies when they deem such joint representation desirable.

THE ENGINEERING MANPOWER COMMISSION

OF ENGINEERS JOINT COUNCIL

The Engineering Manpower Commission was organized in 1951 as part of Engineers Joint Council, to serve as a focus for national technological manpower problems.

The Commission's program is carried out through the collection, analysis, and publication of significant data on engineering manpower, as well as the development of programs and policies designed to acquaint the public with the importance of engineering to the national welfare.

The Engineering Manpower Commission is charged with the following responsibility:

"To engage in studies and analyses of the supply, demand, and utilization of engineering and technical manpower; to make recommendations, conduct programs, and develop reports concerning these aspects of engineering and technical manpower; and to carry on such other programs in the field of manpower as may be authorized by the Board of Directors of EJC."

EMC OFFICERS AND STAFF, 1973

George E. Moore . . . . . Chairman

Francis Budde . . . . . .Vice-Chairman

Arthur Hartford . . . . . .Vice-Chairman

Richard C. Fremon . . . . . Chairman Surveys Committee

John D. Alden . . . . . .Executive Secretary

Christine F. Vachula. . . Assistant to Executive Secretary

ACKNOWLEDGMENTS

The surveys on which this report is based were conducted by the Engineering Manpower Commission staff with the assistance of Donald G. Dickason, Director of Engineering Admissions at Cornell University. The data tables and text were typed by Christine F. Vachula. The project was under the overall direction of John D. Alden, Director of Manpower Activities, Engineers Joint Council.

The assistance of the American Society for Engineering Education, which supported a large part of the data collection and processing expenses by means of a two-year grant, is gratefully acknowledged.

We owe particular thanks to all of the Deans, Registrars, and Placement Directors who responded to our surveys. Their cooperation in providing the basic source data is essential to the production of this report.

CONTENTS

THE PLACEMENT STATUS OF ENGINEERING AND TECHNOLOGY GRADUATES, 1973

The Overall Picture	7
Bachelor's Degree Graduates in Engineering	11
Master's Degree Engineering Graduates	17
Doctor's Degree Engineering Graduates	19
Associate Degree Technology Graduates	21
Bachelor's Degree Technology Graduates	26
Outlook as Seen by Placement Directors	30
"No Information" Reports	33

Tables

1	Placement Status of Bachelor's Degree Engineering Graduates-1973 Compared with Previous years	11
2	Placement Status of Bachelor's Degree Engineering Graduates-1973 ECPD Accredited and Non-Accredited Schools	13
3	Placement Status of Engineering Graduates by Curriculum-1973-Bachelor's Degree Programs	15
4	Starting Salaries of 1973 Graduates - Bachelor's Degree Level	16
5	Placement Status of Engineering Graduates by Curriculum-1973-Master's Degree Programs	17
6	Starting Salaries of 1973 Graduates-Master's Degree Level	18
7	Placement Status of Master's and Doctor's Degree Engineering Graduates-1973 Compared with Previous Years	18
8	Placement Status of Engineering Graduates by Curriculum-1973-Doctor's Degree Programs	19
9	Starting Salaries of 1973 Graduates-Doctor's Degree Level	20
10	Placement Status of Associate Degree Technology Graduates-1973 Compared with Previous Years	21
11	Placement Status of Two-Year Technology Graduates-1973 ECPD Accredited and Non-Accredited Schools	22
12	Placement Status of Technology Graduates by Curriculum-1973-Associate Degree Programs	23
13	Monthly Starting Salaries of 1973 Technology Graduates-Associate Degree Level	24
14	Placement Status of Bachelor's Degree Technology Graduates-1973 Compared with Previous Years	26
15	Placement Status of Technology Graduates by Curriculum-1973-Bachelor's Degree Programs	27
16	Placement Status of Bachelor's Degree Technology Graduates-1973-ECPD Accredited and Non-Accredited Schools	28
17	Monthly Starting Salaries of 1973 Technology Graduates-Bachelor's Degree Level	29
18	Employment Outlook This Year Compared to 1972	30
19	Demand for Engineering Graduates Compared to Other Curricula	31
20	Demand Outlook for Next Year (1974)	32

ENGINEERING DEGREES 1972-73
Introduction 35
Tables
21 Engineering Degrees by Curriculum and Level, 1972-73 36
22 Engineering Degrees, All U.S. Institutions 1949-73 38
23 Summary of Engineering Degrees by School, 1972-73 42
24 Engineering Bachelor's Degrees by School and Curriculum 45
25 Engineering Master's Degrees by School and Curriculum 50
26 "ENGINEER" Degrees by School and Curriculum 53
27 Engineering Doctor's Degrees by School and Curriculum 54

TECHNOLOGY DEGREES 1972-73
Introduction 57
Tables
28 Technology Degrees by Curriculum and Level, 1972-73 58
29 Technology Degrees Reported by Institutions Having at Least One Curriculum Accredited by ECPD 1954-1973 59
30 Technology Degrees, ECPD Schools Only 1972-73 60
31 Engineering Technology Associate Degrees by School and Curriculum 63
32 Engineering Technology Bachelor's Degrees by School and Curriculum 69
33 Engineering Technology Post-Baccalaureate Degrees by School and Curriculum 70
34 Industrial Technology 2-Year Certificates by School and Curriculum 71
35 Industrial Technology Associate Degrees by School and Curriculum 73
36 Industrial Technology Post-Baccalaureate Degrees by School and Curriculum 75
37 Industrial Technology Bachelor's Degrees by School and Curriculum 76

THE PLACEMENT STATUS OF ENGINEERING AND TECHNOLOGY GRADUATES, 1973

THE OVERALL PICTURE

Newly-graduating engineers and technicians of the class of 1973 enjoyed greatly improved job prospects, according to statistics compiled from a survey of the nation's engineering educational institutions. At all degree levels, graduates had higher percentages employed and fewer without job offers or other plans than in 1971 or 1972. The employment situation improved despite the fact that larger numbers of graduates were seeking jobs in preference to other possible activities. The percentage going into military service fell to its lowest level since the EMC placement surveys were started in 1958, and the proportion going on to advanced education did not change appreciably compared to the last two years. Also, the percentage without job offers or other plans dropped below last year's figure at all levels. This group appears to be made up largely of graduates who were not seeking immediate employment. The numbers still considering job offers were about the same as last year, while the numbers with other definite plans were up slightly.

At all degree levels the big tradeoff is between employment and further study, and here the pattern does not seem to have changed appreciably in recent years. At both the bachelor's and master's level in engineering, and at the two-year associate level in technology, between one-fifth and one-fourth of the graduates were continuing their education. In contrast, the PhD in engineering and the bachelor of technology degree represent terminal points for practically all graduates.

At the master's and doctor's levels there was an increase in the percentage with other plans. Comments by several placement officials indicate that this category has grown because of an increase in the number of foreign students returning to their home countries. Under current immigration procedures it is difficult for these graduates to remain in the U.S. even though engineering jobs may be available.

Comparing this year with last, 38 percent of the placement directors reported an increased demand for bachelor's degree engineers. The strength of the observed demand decreased gradually through the other degree levels to the PhD, where 18 percent of the respondents reported demand much stronger, and 46 percent somewhat stronger, than last year. On the other hand, data presented elsewhere in this report indicate little variation in the actual placement status of the different degree levels. The reason for the difference between the placement directors' subjective evaluation of demand and the actual employment of graduates is that there were more job openings than available graduates, so that any further demand on the part of employers merely presented a greater choice of opportunities for the most sought-after people.

Placement directors cited few instances of difficulty in placing this year's graduates, and these were widely scattered. Several mentioned the problem of finding jobs for foreign nationals, and some thought PhD's were harder to place than the other degree levels. Many qualified their answers by pointing out that the difficulty lay in low scholastic standing or a lack of flexibility on the part of the individuals concerned. A few reported difficulty in placing graduates of some of the more highly specialized fields. Part of this problem is apparently due to over-selling "glamor" fields at the bachelor's level. Employers

generally seem to be wary of accepting a four-year degree as evidence of special competence in fields that are usually reserved for advanced study. Architectural engineering, a field with relatively few graduates, had the highest percentage without job offers or plans, and the smallest number going to graduate school. However, placement problems in general appeared to be of little significance in the overall picture.

Placement directors rated the demand for engineering graduates well ahead of business and management, education, liberal arts and humanities, social sciences, life sciences, and physical sciences graduates. A solid majority also rated engineering as strong as or stronger than accounting.

Salaries offered to new engineering and technology graduates at all degree levels responded to the improved demand by increasing between 3.0 and 5.9 percent over last year. These increases are all greater than those from 1971 to 1972 except at the PhD level, where the percentage increase was slightly less this year. Engineers again led practically all other occupations in salaries offered to new graduates as reported by the College Placement Council. Chemical engineering was highest at the bachelor's level at $962 per month and at the master's level at $1093, but electrical engineering led the doctor's degree list with $1508.

As last year, women graduates averaged slightly higher salary offers than men, $936 compared to $930, at the BS degree level. Blacks and other minority graduates were reported to be in very strong demand, but separate statistics are not available for these students.

It appears that the relatively poor employment situation in 1970 and 1971 produced only a temporary slowdown in the steady rise of starting salaries. As

smaller graduating classes leave college in the next few years, it is probable that the trend will be more sharply upward if demand continues to be as strong as now appears likely.

Placement officials anticipate even stronger demand next year, following the pattern established over the last two years. The demand for PhD engineers will probably be in balance with or slightly in excess of supply, which should cause no problems for next year's doctorates. Many respondents expect major shortages of bachelor's and associate degree graduates next year, while few foresee a surplus of graduates at any degree level.

No specialties appear to represent potential problem areas except possibly aerospace, but even here some schools see a shortage of graduates. Demand could be spotty in computer science, electronics, engineering sciences, and perhaps in some "glamor" specialties that may have been "oversold." The strongest continuing demand is for bachelor's degree graduates with a sound education in one of the basic branches of engineering. Those whose field is too specialized are likely to find themselves sought-after one year and in surplus supply the next, while those whose education is too general are likely to find their choice of jobs limited because of the specific preferences of most employers.

BACHELOR'S DEGREE GRADUATES IN ENGINEERING

The improvement in industrial recruiting that began in 1972 continued strongly in 1973 and resulted in a large increase in the percentage of new graduates employed or still considering job offers at the time of graduation. This occurred in spite of decreases in the numbers entering graduate school or military service. The percentage without job offers or other definite plans was also down to less than the 1972 figure. Since the size of the 1973 graduating class was almost the same as last year's, it is apparent that the increase in employment was absolute as well as relative. Table 1 shows how the placement status of bachelor's degree engineering graduates has varied from 1958 to 1973.

TABLE 1

Placement Status of Bachelor's Degree Engineering Graduates

1973 Compared with Previous Years

Placement Status	1958	1959	1960	1961	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Employed**	59%	63%	62%	65%	59%	60%	54%	64%	68%	71%	64%	52%	54%	62%
Entering Graduate Studies**	10	11	10	14	17	25	26	25	18	16	17	20	20	19
Entering Military Service	9	8	8	11	9	8	7	9	11	9	11	14	9	5
Other Specific Plans	--	1	2	2	3	1	1	2	1	*	2	2	2	3
Graduates Committee (Total of Above)	79	83	82	92	88	87	85	98	96	96	92	88	84	88
Considering Job Offers	11	11	11	5	10	12	14	2	3	3	4	3	5	6
No Offers or Plans	10	6	7	3	2	1	*	*	*	*	4	9	11	5
Total with Status Known	100	100	100	100	100	100	100	100	100	100	100	100	100	100

*Less than 1%

**For 1965 and later years, those employed and entering full-time graduates studies sponsored by employer are included in both categories. Totals for these years are therefore less than the sum of individual categories.

Note: Percentages may not add to totals because of rounding.

The favorable employment climate was confirmed by comments from the placement directors, 88 percent of whom reported that demand was much stronger or somewhat stronger than last year. Only at three schools was recruiting demand reported to be weaker than in 1972. Under the circumstances it appears that the 5 percent of graduates without job offers or other plans consisted mostly of people who were not seeking immediate employment or who had special problems. The reduction in this category compared to 1971 and 1972 probably reflects not only an improvement in employment opportunities but also the general settling-down that has been observed on college campuses in other contexts.

The slight drop in the percentage entering graduate study, from 20 percent to 19 percent, may not be statistically significant, but there seems to be little doubt that advanced study is no longer increasing in popularity among new engineering graduates. The sharp growth rate from 1960 to 1966 was at the time thought to be leading toward a day when most engineering students would proceed directly to an advnaced degree. In retrospect it appears that the trend was artifically stimulated in the late 1960's by pressures of the military draft. There are also indications that more and more students are seeking some work experience before returning to school for advanced study. In any case the placement statistics for recent years indicate a leveling-off of the tendency of bachelor's degree recipients to stay in school and study for higher degrees.

The differences between ECPD-accredited and other schools are shown in Table 2. As in earlier surveys, the graduates of ECPD schools proved twice as likely to continue their education, but more likely to be without job offers or other plans. However, the number of graduates from non-ECPD schools is so small a proportion of the total that these differences are of little significance in the overall manpower supply picture.

TABLE 2

Placement Status of Bachelor's Degree Engineering Graduates - 1973

ECPD Accredited and Non-Accredited Schools

Placement Status	All Schools		ECPD Accredited Schools		Non-Accredited Schools	
	No.	%	No.	%	No.	%
Employed	11033	62	10458	62	575	71
Employed and Entering Full-Time Graduate Study	127	*	126	*	1	*
Entering Graduate Study	3287	19	3218	19	69	9
Entering Military Service	956	5	926	5	30	4
Other Specific Plans	477	3	454	3	23	3
Graduates Committed (Total of Above)	15880	88	15182	89	698	86
Considering Job Offers	1100	6	998	6	102	13
No Offers or Plans	983	5	971	6	12	1
Total with Status Known	17963	100	17151	100	812	100
No Information	2646	--	2551	--	95	--
Total Reported	20609	--	19702	--	907	--

*Less than 1%

NOTE: Percentages may not add to totals because of rounding.

Table 3 presents the placement statistics for the major curricula separately. It is dangerous to draw conclusions about differences between curricula or changes from year to year, especially where the statistics are based on small numbers of students. Some trends, however, are quite consistent. Advanced study tends to be noticeably more popular among graduates of the engineering sciences, general or unified engineering, nuclear, chemical, and "all other" curricula. On the other hand, students majoring in architectural, naval and marine, and petroleum engineering are consistently less likely to pursue graduate study.

It is difficult to interpret the differences among curricula in the two bottom rows of the table - those still considering job offers and those without offers or other plans. Particularly in the less populous fields, these numbers tend to fluctuate widely from year to year, which leads one to suspect that the changes are due more to accidental differences in the survey than to fundamentals of the job market. Comments from placement directors tend to bear this out, as practically none mentioned having difficulty this year in placing graduates of the agricultural, architectural, nuclear, or petroleum engineering curricula. Although several reported that aerospace placements were their biggest problem, the statistics of Table 3 do not indicate any major nationwide difficulty even in this field.

TABLE 3

Placement Status of Engineering Graduates by Curriculum - 1973

Bachelor's Degree Programs

Placement Status	Aero.	Agr.	Arch.	Ceram.	Chem.	Civil	Elec.	Eng. Gen.	Eng. Sci. Phys./Mech.
Employed**	51%	58%	63%	62%	58%	65%	62%	58%	39%
Entering Full-Time Graduate Study**	16	17	7	22	26	18	19	23	39
Entering Military Service	15	7	1	2	3	5	5	5	4
Other Specific Plans	3	3	4	*	3	3	3	4	2
Graduates Committed (Total of Above)	85	85	75	87	89	90	88	90	84
Considering Job Offers	11	11	5	8	4	5	6	5	8
No Offers or Plans	4	4	20	5	6	5	6	5	8

Placement Status	Indus.	Mech.	Metal.	Min. & Geol.	Nav.	Nuc.	Petro.	All Others	Total
Employed**	64%	68%	61%	64%	70%	47%	62%	51%	62%
Entering Full-Time Graduate Study**	16	16	22	17	11	30	12	23	19
Entering Military Service	7	5	3	5	8	4	3	8	5
Other Specific Plans	3	2	3	5	5	5	*	2	3
Graduates Committed (Total of Above)	89	89	89	90	94	85	78	82	88
Considering Job Offers	5	6	5	8	4	4	20	8	6
No Offers or Plans	6	4	6	2	2	12	2	9	5

*Less than 1%

**Those employed and entering graduate studies sponsored by employer are included in both categories, but are counted only once in totals.

NOTE: Percentages may not add to totals because of rounding.

The salaries offered to new graduates were up by 4.3 percent over the average for 1972. Table 4 gives the figures for the major engineering curricula and related fields in comparison with the non-technical average. As usual, engineering led all other curricula in terms of beginning salaries, as reported by the College Placement Council. The percentage increase over last year was substantially larger than from 1971 to 1972 except for the co-op program in aeronautical engineering, but this is a small program in which statistics can easily fluctuate from year to year. As usual, salaries for co-op graduates were higher than the average for all graduates in every curriculum.

TABLE 4

Starting Salaries of 1973 Graduates

Bachelor's Degree Level

Curriculum	All Graduates		CO-OP Programs	
	Average Dollars Per Month	Percent Increase Over 1972	Average Dollars Per Month	Percent Increase Over 1972
Aeronautical Engineering	920	4.1	949	1.1
Chemical Engineering	962	3.7	975	4.4
Civil Engineering	908	4.5	920	6.0
Electrical Engineering	931	4.8	945	4.3
Industrial Engineering	903	3.7	935	4.2
Mechanical Engineering	927	3.7	947	4.2
Metallurgical Engineering	921	4.5	931	4.4
Men, All Engineering Curricula	930	4.3	947	4.3
Women, All Engineering Curricula	936	4.8	NA	NA
Engineering & Industrial Technology	861	4.5	870	NA
Physics, Chemistry, Mathematics	833	4.8	--	--
Non-Technical (Average)	808	3.5	--	--

Source: The College Placement Council, Inc.

MASTER'S DEGREE ENGINEERING GRADUATES

Master's degree graduates did well again this year, with only two percent being without job offers or other plans while 64 percent were employed or considering job offers. All fields shown in the breakdown of Table 5 were in good shape, with no significant weakness evident. Although the percentage employed did not change much from last year, there was a strong shift in the makeup of this group, with more entering employment for the first time and fewer returning to jobs previously held. Other than this, changes from 1970 to date, as indicated in Table 7, have been minor. There appears to be a slight upward trend in the number continuing full-time study, which is consistent with the smaller proportion of previously employed people among this year's sample of graduates.

Salaries at this level continued to increase, except for the metallurgy curriculum, but the rate of increase was generally a bit lower than at the bachelor's

TABLE 5

Placement Status of Engineering Graduates by Curriculum - 1973

Master's Degree Programs

Placement Status	Chem.	Civil.	Elec.	Eng. Sci.	Indust.	Mech.	Other	Total
Newly Employed	56%	55%	39%	24%	37%	47%	48%	45%
Returning to Job	4	14	25	15	20	15	12	17
Full-Time Study	25	14	22	50	17	21	26	22
Military Services	5	8	5	5	11	8	7	7
Other Specific Plans	6	8	5	1	13	5	[illegible]	6
Graduates Committed (Total of Above)	95	98	96	96	98	96	95	96
Considering Job Offers	1	1	2	2	*	3	2	2
No Offers or Plans	3	1	2	2	2	1	2	2

*Less than 1%

NOTE: Percentages are based on total with status known and may not add to totals because of rounding. Statistics based on 4320 graduates reported, of whom no information was available on 470.

level. Again, the average salaries offered to engineers were higher than those for any other curriculum except master's of business administration with a technical undergraduate major. Table 6 gives the statistics for 1973.

TABLE 6

Starting Salaries of 1973 Graduates

Master's Degree Level

Curriculum	Average Dollars Per Month	Percent Increase Over 1972
Chemical Engineering	1093	3.6
Civil Engineering	1020	2.7
Electrical Engineering	1067	4.8
Industrial Engineering	1055	3.6
Mechanical Engineering	1070	3.9
Metallurgy and Related	1035	-0.1
All Engineering Fields	1063	3.8
Computer Science	1080	2.8
Business Administration, Management*	1177	4.3

*After technical undergraduate degree.

Source: The College Placement Council, Inc.

TABLE 7

Placement Status of Master's and Doctor's Degree Engineering Graduates - 1973 Compared with Previous Years

	Master's Degree				Doctor's Degree			
Placement Status	1970	1971	1972	1973	1970	1971	1972	1973
Newly Employed	38%	32%	38%	45%	68%	74%	64%	69%
Returning to Job	24	21	25	17	10	10	14	11
Full-Time Study	19	21	19	22	4	3	2	2
Military Service	9	8	7	7	3	3	2	3
Other Specific plans	4	3	4	6	4	4	9	11
Graduates Committed (Totals of Above)	94	96	93	96	89	94	92	95
Considering Job Offers	3	2	3	2	3	3	3	3
No Offers or Plans	4	2	4	2	8	4	5	2
Total with Status Known	100	100	100	100	100	100	100	100

Note: Percentages may not add to totals because of rounding.

DOCTOR'S DEGREE ENGINEERING GRADUATES

Despite fears of surplus graduates at this level, doctor's degree engineers proved to be in strong demand this year, as indicated by the statistics in Tables 7 and 8. The percentage with other plans has risen noticeably in the last two years, probably because of increasing numbers of foreign nationals returning to their own countries. It has been difficult for these graduates to obtain the labor certification necessary to achieve immigrant status since the immigration procedures were tightened in 1971. There tends to be more variation among curricula at the doctorate level because of the smaller number of graduates reported, but all fields showed strong placement patterns. Graduates in the engineering sciences curriculum were most likely to be without job offers or other plans.

TABLE 8

Placement Status of Engineering Graduates by Curriculum - 1973

Doctor's Degree Programs

Placement Status	Chem.	Civil	Elec.	Eng.Sci.	Indust.	Mech.	Other	Total
Newly Employed	73%	66%	71%	67%	61%	67%	72%	69%
Returning to Job	5	12	11	7	12	17	12	11
Full-Time Study	3	*	2	*	0	*	3	2
Military Service	*	5	*	0	6	6	*	3
Other Specific Plans	15	10	11	18	14	6	5	11
Graduates Committed (Total of Above)	96	94	96	94	92	96	94	95
Considering Job Offers	3	6	2	*	8	1	3	3
No Offers or Plans	1	0	2	5	0	3	2	2

*Less than 1%

NOTE: Percentages are based on total with status known and may not add to totals because of rounding. Statistics based on 1038 graduates reported, of whom no information was available on 62.

One reason for the continued strength in the placement of doctor's degree engineers is the fact that the number produced this year was down by about six percent from 1972. Advanced degree enrollments in engineering reacted quickly and sharply to the employment recession of 1970-71, and the results are now apparent in the form of smaller graduating classes. By contrast, other doctorate fields have been much less sensitive to employment conditions and the number of prospective graduates continues to increase. While graduates in the social sciences and humanities are expected to encounter severe shortages of suitable jobs in the next few years, it appears unlikely that engineering doctors will have much trouble in finding employment, in part because fewer will be graduating and in part because the demand for them appears to be holding firm.

Starting salaries, as shown in Table 9, were up again in all major fields, with the highest offers going to electrical engineers and the lowest to civil engineers. The latter, however, appear to be gradually narrowing the gap that has existed between their salaries and those of the other engineering fields since the surveys were started.

TABLE 9

Starting Salaries of 1973 Graduates

Doctor's Degree Level

Curriculum	Average Dollars Per Month	Percent Increase Over 1972
Chemical Engineering	1438	2.3
Civil Engineering	1298	5.8
Electrical Engineering	1508	4.8
Mechanical Engineering	1418	2.7
Metallurgy and Related	1447	8.7
All Engineering Fields	1449	3.8

Source: The College Placement Council, Inc.

ASSOCIATE DEGREE TECHNOLOGY GRADUATES

Technicians were also beneficiaries of the improved employment climate this year, as indicated in Table 10, but the changes since last year were not particularly striking. Although 68 percent had accepted employment or were still considering job offers at the time of the survey, a quarter of the two-year graduates were continuing their education. This statistic highlights the importance of the two-year programs as feeders into the higher educational system, because most of the associate degree curricula covered by the EMC survey are usually considered to be terminal in nature. Obviously, many of these programs also provide the graduate with credits that are directly transferable toward a bachelor's degree in engineering or other fields.

TABLE 10

Placement Status of Associate Degree Technology Graduates

1973 Compared with Previous Years

Placement Status	1967	1968	1969	1970	1971	1972	1973
Employed	63%	54%	63%	56%	47%	58%	61%
Full-Time Study	15**	30	23	28	29	24	25
Military Service	7	7	6	7	8	3	1
Other Specific Plans	10	1	1	*	1	2	1
Graduated Committed (Total of Above)	95	93	94	91	85	87	88
Considering Job Offers	4	7	6	5	8	9	7
No Offers or Plans	1	*	*	4	7	4	5
Total with Status Known	100	100	100	100	100	100	100

*Less than 1%.

**In the 1967 survey the category of full-time study was not specifically included in the questionnaire, but was written in by some respondents and included in "other specific plans" by others. The true proportion going on to full-time study was probably about 24% for associate degree graduates.

NOTE: Percentages may not add to totals because of rounding.

Data for this year's survey came about equally from schools with and without curricula accredited by ECPD. A comparison of the two groups, Table 11, shows significant differences. Students from the ECPD schools are much more disposed to continue their college study, with the result that the percentage entering employment is reduced. On the other hand, graduates of the ECPD schools are more likely to have no job offers or other plans. Since salaries commanded by the ECPD school students tend to be higher, there may be important differences in the recruiting patterns followed by employers at the two types of institutions. Also, more of the students with high class standing in the ECPD schools are being attracted to further study, and this could affect the approach taken by company recruiters on the two-year campuses.

TABLE 11

Placement Status of Two-Year Technology Graduates - 1973

ECPD Accredited and Non-Accredited Schools

Placement Status	All Schools		ECPD Schools		Non-ECPD Schools	
	No.	%	No.	%	No.	%
Employed	3796	61	1882	56	1914	68
Full-Time Study	1539	25	1019	30	520	18
Military Service	64	1	33	*	31	1
Other Specific Plans	68	1	59	2	9	*
Graduates Committed (Total of Above)	5467	88	2993	89	2474	88
Considering Job Offers	427	7	147	4	280	10
No Offers or Plans	287	5	223	7	64	2
Total with Status Known	6181	100	3363	100	2818	100
No Information	664	--	353	--	311	--
Total Reported	6845	--	3716	--	3129	--

NOTE: Percentages may not add to totals because of rounding.

The breakdown by curricula, Table 12, shows evidence of weakness in the aerospace-related programs, with 15 percent having no job offers or other plans, and in the computer field, where there were scattered reports of local shortages of jobs. The more "hands on" kind of programs, such as air conditioning, automotive, industrial, and manufacturing technologies, had few graduates without job offers or other plans. With an occasional exception, these curricula are noticeably less likely to produce graduates who continue study. It is dangerous to generalize about the technology curricula because programs vary widely from school to school and programs with similar names may be quite different in content. Also, local factors undoubtedly have a strong influence on the placement status of graduates from these schools.

TABLE 12

Placement Status of Technology Graduates by Curriculum - 1973

Associate Degree Programs

Placement Status	Aero.	Air Cond.	Auto.	Chem.	Civil	Com-puter	Draft-ing
Employed	31%	78%	81%	67%	61%	57%	64%
Full-Time Study	44	15	8	24	25	19	24
Military Service	6	*	*	0	1	*	*
Other Specific Plans	4	0	0	2	*	1	*
Graduates Committed (Total of Above)	85	94	89	93	88	78	89
Considering Job Offers	0	6	11	4	7	14	8
No Offers or Plans	15	0	0	4	5	8	3

Placement Status	Elec-trical	Elec-tronics	Indust.	Mfg.	Mech.	Other	Total
Employed	60%	55%	86%	61%	60%	53%	61%
Full-Time Study	24	31	14	29	27	31	25
Military Service	*	*	0	3	2	1	1
Other Specific Plans	*	1	0	2	1	2	1
Graduates Committed (Total of Above)	86	88	100	96	91	87	88
Considering Job Offers	7	6	0	4	5	7	7
No Offers or Plans	7	6	0	0	4	6	5

*Less than 1%

NOTE: Percentages are based on total with status known and may not add to totals because of rounding.

The great variation within and among the technology curricula is amply illustrated by the salary statistics of Table 13. The overall mean starting salary for 1973 was $671 per month, with the average slightly higher in the ECPD schools and slightly lower in the others. The averages for most curricula were clustered quite closely around the overall mean, with architectural technology showing the lowest and aerospace the highest starting salaries. The aerospace finding may appear inconsistent with the

TABLE 13

Monthly Starting Salaries of 1973 Technology Graduates

Associate Degree Level

Curriculum	No. of Schools	No. of Salaries	Avg. Low*	Mean Non-ECPD Schools**	Overall Mean	Mean ECPD Schools**	Avg. High***
Aerospace	2	23	646	--	726	--	812
Air Conditioning	6	60	514	688	678	645	728
Architectural	13	137	503	595	600	609	710
Automotive	6	106	464	--	623	--	747
Chemical	11	53	620	746	670	643	748
Civil	26	289	587	688	693	694	802
Computer	10	116	540	641	636	635	744
Drafting	13	79	521	598	601	614	724
Electrical	31	333	566	702	709	712	829
Electro-Mechanical	3	12	563	--	618	--	732
Electronics	31	350	568	678	681	683	774
Environmental	6	34	604	718	677	658	750
Industrial	10	62	588	687	670	666	746
Manufacturing	4	53	525	--	643	--	760
Mechanical	36	259	616	703	683	678	776
Other	15	122	607	597	661	695	812
All Curricula	67	2088	564	654	671	679	763

*Mean of the lowest figures reported by responding schools.

**ECPD schools are those having at least one engineering technology curriculum accredited by ECPD. Specific curricula for these schools may or may not be accredited. There were 41 ECPD schools and 26 others in the total of 67 included in this table.

***Mean of the highest figures reported by responding schools.

previous placement data that showed this field to be relatively low in the demand for graduates, but it should be noted that only two schools provided salary data. It has also been observed that reduced demand for graduates is reflected in fewer job offers, especially for students with weak academic records, while still resulting in brisk competition and good salary offers to people in upper fractions of the graduating class.

The figures for "Avg. Low" and "Avg. High" salaries in Table 13 are simply the arithmetical averages of the lows and highs reported by each school, and thus provide only rough limits on the range of salaries offered. Generally speaking, offers above or below these rough limits, while quite common, are probably based on individual factors. Because of the many variables affecting the local employment market for technicians, employers and placement personnel should be guided by experience in their own locality, if data are available, as well as by overall statistics such as furnished by the EMC survey.

BACHELOR'S DEGREE TECHNOLOGY GRADUATES

Both the number of schools offering bachelor of technology degrees and the number of graduates continued to increase this year. As at the associate degree level, there is a wide variation in the nature of curricula grouped together under traditional labels, ranging from ECPD-accredited engineering technology programs with a strong technical content to industrial technology curricula with a heavy emphasis on business and managerial skills.

Graduates of these programs shared in the strong industrial demand for new manpower, as indicated in Table 14. The percentage of those entering employment increased substantially as a result of decreases in most of the other placement categories. The proportion of graduates continuing in full-time study fell to an almost negligible three percent.

TABLE 14

Placement Status of Bachelor's Degree Technology Graduates

1973 Compared with Previous Years

Placement Status	1967	1968	1969	1970	1971	1972	1973
Employed	70%	75%	72%	69%	60%	67%	76%
Full-Time Study**	10	4	7	4	5	5	3
Military Service	11	13	12	9	13	7	5
Other Specific Plans	3	2	*	2	4	2	4
Graduates Committed (Total of Above)	93	94	91	84	81	81	87
Considering Job Offers	6	5	8	11	8	12	8
No Offers or Plans	1	*	*	5	11	7	4
Total with Status Known	100	100	100	100	100	100	100

*Less than 1%.

**Because of differences in the survey methodology, data for the different years are not strictly comparable and indicate general trends only. In the 1967 survey the category of full-time study was not specifically included in the questionnaire, but was written in by some respondents and included in "other specific plans" by others.

NOTE: Percentages may not add to totals because of rounding.

The breakdown by curriculum, Table 15, indicates that electrical technology had the highest percentage without job offers or other plans, while mechanical technology had the most who were still considering job offers. Graduates in the other fields listed were largely committed to one specific course of action or another by the time they left school.

TABLE 15

Placement Status of Technology Graduates by Curriculum - 1973

Bachelor's Degree Programs

Placement Status	Civil	Elec.	Indust.	Mech.	Other	Total
Employed	82%	73%	78%	72%	85%	76%
Full-Time Study	3	3	3	2	6	3
Military Service	3	3	9	5	5	5
Other Specific Plans	4	6	2	4	*	4
Graduates Committed (Total of Above)	92	84	92	82	97	87
Considering Job Offers	3	9	6	14	3	8
No Offers or Plans	5	7	2	4	0	4

*Less than 1%.

NOTE: Percentages are based on total with status known and may not add to totals because of rounding.

Table 16 shows how the placement status of graduates differs in relation to ECPD accreditation of curricula in the schools. This year's findings, with the ECPD group more likely to be employed, less likely to be still considering offers, and more likely to have no offers or plans, are the reverse of last year's results. It is probable that such variations are due to differences in timing and in the composition of the group of schools responding to the survey rather than to fundamental changes in the employment picture.

TABLE 16

Placement Status of Bachelor's Degree Technology Graduates - 1973

ECPD Accredited and Non-Accredited Schools

Placement Status	All Schools No.	All Schools %	ECPD Schools No.	ECPD Schools %	Non-ECPD Schools No.	Non-ECPD Schools %
Employed	1490	76	871	79	619	71
Full-Time Study	63	3	38	3	25	3
Military Service	91	5	35	3	56	6
Other Specific Plans	75	4	56	5	19	2
Graduates Committed (Total of Above)	1719	87	1000	91	719	82
Considering Job Offers	162	8	24	2	138	16
No Offers or Plans	88	4	72	7	16	2
Total with Status Known	1969	100	1096	100	873	100
No Information	333	--	209	--	124	--
Total Reported	2302	--	1305	--	997	--

*Less than 1%

NOTE: Percentages may not add to totals because of rounding. ECPD schools are those having at least one curriculum in engineering technology accredited by ECPD.

The salaries offered to bachelor of technology graduates, Table 17, averaged $850 per month, a three percent increase over 1972. This salary level is much closer to the engineering range (Table 4) than to the technician averages (Table 13.) Overall, there was little difference between ECPD and other schools, but each curriculum showed its own pattern. Some of the differences can result from the movement of schools onto the ECPD list, thus shifting large blocks of data from one column to the other as compared to previous years. Such unavoidable artificialities in survey methodology must be discounted by users of the statistics. The cautions about variability among programs with similar names and in the range of salaries offered, as mentioned in connection with the associate degree statistics, also apply here.

TABLE 17

Monthly Starting Salaries of 1973 Technology Graduates

Bachelor's Degree Level

Curriculum	No. of Schools	No. of Salaries	Avg. Low*	Mean Non-ECPD Schools**	Overall Mean	Mean ECPD Schools**	Avg. High***
Civil	13	237	709	856	846	840	975
Electrical	22	412	713	849	832	823	1004
Industrial	13	186	630	790	811	871	989
Mechanical	18	307	721	921	871	849	1008
Other	18	182	767	842	904	933	993
All Curricula	35	1324	708	847	850	853	994

*Mean of the lowest figures reported by responding schools.

**ECPD schools are those having at least one engineering technology curriculum accredited by ECPD. Specific curricula for these schools may or may not be accredited. There were 17 ECPD schools and 18 others in the total of 35 included in this table.

***Mean of the highest figures reported by responding schools.

OUTLOOK AS SEEN BY PLACEMENT DIRECTORS

In a special questionnaire accompanying the survey, placement directors were asked to give their evaluation of the current and future job outlook for engineering and technology graduates. 267 took the trouble to reply.

When asked to compare this year with last, 88 percent of the placement directors reported that the employment climate for bachelor's degree engineers was somewhat stronger or much stronger. The strength of the observed demand decreased gradually through bachelor's of engineering technology, associates in technology, master's in engineering, bachelor's of industrial technology, and older alumni. The lowest group was PhD's, for which 18 percent of the placement officials reported demand much stronger, and 46 percent somewhat stronger, than last year. The complete statistics are presented in Table 18. Although these ratings are somewhat subjective, they are helpful in amplifying the statistics reported elsewhere in this survey which indicate little difference in the actual placement status of the different degree levels. The explanation is that there were enough job openings for practically all graduates seeking them, so that further demand resulted in increased competition on the part of employers and consequently a greater choice of opportunities for the most sought-after graduates.

TABLE 18

EMPLOYMENT OUTLOOK THIS YEAR COMPARED TO 1972

	MUCH BETTER	SOMEWHAT BETTER	ABOUT SAME	SOMEWHAT WORSE	MUCH WORSE
BS ENGINEERING	55%	33%	11%	2%	0
MS ENGINEERING	27	55	17	1	0
PHD ENGINEERING	18	46	33	1	1
AS TECHNOLOGY	35	48	18	0	0
BS ENGRG. TECH.	35	48	17	0	0
BS INDUST. TECH.	28	38	34	0	0
OLDER ALUMNI	24	52	23	1	0

Note: Based on replies from 267 schools, but all did not answer every question.
All percentages rounded.

Placement directors, asked to cite specialties in which they had encountered difficulty placing this year's graduates, had few to report, and these were generally widely scattered. About a dozen specifically mentioned the problem of finding jobs for foreign nationals, several thought PhD's were harder to place than the other degree levels, and a number qualified their answers by pointing out that the difficulty lay in low scholastic standing or a lack of flexibility on the part of the individuals concerned. Aerospace engineering was mentioned by eleven schools as being the most difficult specialty to place, and smaller numbers cited problems with civil and electrical engineering. Nationally, however, the statistical evidence shows that these specialties were comparable to the other major fields in terms of graduates actually placed.

A few schools reported difficulty in placing bachelor's degree graduates in a "glamor" specialty like environmental or biomedical engineering. Part of this problem may be due to over-selling specialized fields at the bachelor's level. Employers generally realize that little real specialization can be achieved at this level and consequently are wary of accepting a four-year degree as evidence of special competence in fields that are usually reserved for advanced study. Generally speaking, however, placement problems appeared to be localized and not particularly significant in the overall picture.

TABLE 19

DEMAND FOR ENGINEERING GRADUATES COMPARED TO OTHER CURRICULA

	MUCH STRONGER	SOMEWHAT STRONGER	ABOUT SAME	SOMEWHAT WEAKER	MUCH WEAKER
ACCOUNTING	7%	21%	63%	6%	3%
BUSINESS & MGT.	24	52	22	1	1
EDUCATION	77	16	4	3	0
LIB. ARTS & HUMAN.	85	9	5	1	0
LIFE SCIENCES	50	36	12	2	0
PHYSICAL SCIENCES	39	52	9	0	0
SOCIAL SCIENCES	81	12	6	1	0

Note: Based on replies from 267 schools, but all did not answer every question. All percentages rounded.

According to placement officials, the demand for engineers and technicians was stronger than that for graduates of most other programs. As shown in Table 19, an overwhelming majority of placement directors rated engineering ahead of business and management, education, liberal arts and humanities, social sciences, life sciences, and physical sciences. A few schools indicated a stronger demand for accountants than for engineers, but even here a solid majority rated engineering as strong as or stronger than accounting.

Placement directors look for even stronger demand next year, following the pattern established over the last few years, as shown in Table 20. Although the demand for PhD engineers will probably be in balance with or slightly in excess of supply, repetition of this year's experience will certainly cause no problems for next year's doctorates. About a quarter of the respondents believe there will be major shortages of bachelor's and associate degree graduates next year, while only a few foresee a surplus of graduates at any degree level.

TABLE 20

DEMAND OUTLOOK FOR NEXT YEAR (1974)

	MAJOR SHORTAGE OF GRADUATES	SLIGHT SHORTAGE OF GRADUATES	ABOUT BALANCED	MORE GRADUATES THAN JOBS
BS ENGINEERING	27%	55%	16%	2%
MS ENGINEERING	16	43	40	1
PHD ENGINEERING	7	27	54	12
AS TECHNOLOGY	31	38	26	5
BS ENG'G. TECH.	24	44	27	5
BS INDUST TECH.	18	38	39	5

Note: Based on replies from 267 schools, but all did not answer every question.
All percentages rounded.

No specialities could be singled out as potential problem areas except possibly aerospace. Even here some schools see a shortage of graduates. Other fields where the demand could be spotty are computer science, electronics, engineering sciences, and possibly some small "glamor" specialties that may have been "oversold". There is no question that the strongest continuing demand at the bachelor's degree level is for graduates with a sound education in one of the basic branches of engineering. Graduates whose specialty is too narrow may find themselves eagerly sought-after one year and in surplus supply the next, while those whose education is too general may find that their choice of jobs is limited because of the specific preferences of most employers.

"NO INFORMATION" REPORTS

As in past years, a number of respondents to this survey reported that they had no information on the placement status of many graduates. In order to reduce the degree of uncertainty in the statistics, replies which showed "no information" for more than about 30 percent of the graduates listed were excluded from the tabulations. This was done on the basis of a special analysis in 1972 which showed that most of the "no information" students were already placed, and that they were distributed among the various activities or plans in about the same proportions as the graduates for whom status was reported. The new procedure reduced the percentage of "status unknown" from a low of 6.0 percent in the case of PhD engineers and a maximum of 14.5 percent for bachelor's of technology.

As a check on the validity of the procedure, a separate tabulation was made of the schools excluded from the basic statistics. These schools included 6,259 graduates, but no information was known for 3,104 of these, nearly half of the total. The placement

statistics were then recomputed with these schools included. There was no difference in the statistics for the two largest groups, BS degree engineers and AS degree technicians. In the smaller groups, differences did not exceed 3 percantage points for any placement category.

The checks of the last two years indicate that the degree of uncertainty caused by "no information" responses was probably never a matter for serious concern, but can be greatly reduced by simply excluding replies where the percentage of "no information" exceeds an arbitrary limit of 25 or 30 percent, without detracting from the validity of the statistics. This procedure will therefore be followed in future surveys as long as it continues to appear appropriate.

More fundamentally, however, it would be highly desirable if schools made a greater effort to keep informed of the placement status of their students. Several schools are able to report consistently on practically all of their students and indicate that it is not too difficult to obtain the necessary information. Such a demonstration of interest on the part of the school in the career plans of its graduates would appear to offer many benefits to all concerned in addition to providing better statistics about the engineering profession.

ENGINEERING DEGREES, 1972-73

The number of engineering degrees earned during the school year ending in June 1973 showed a decrease from the previous year for the first time since 1966, reflecting the decline in entering freshman enrollments that has been observed over a number of years. Although the drop was not large, it occurred at all three degree levels and is only a foretaste of the major reduction in the number of graduates that will be seen when the classes of 1975 and 1976, which suffered severe decreases in entering freshmen, leave college.

For the 1972-73 school, 285 U.S. engineering schools produced 43,429 bachelor's, 16,718 master's, 434 engineer, and 3,587 doctor's degree graduates. The overall net decrease compared to the previous year was 1,152. Percentage wise, the declines were 1.7 percent at the bachelor's, 1.7 percent at the master's, and 5.0 percent at the doctor's level. Although the number of engineer degrees (intermediate between the master's and doctor's levels) increased, the actual number of these degrees is so small in comparison with the other levels that changes have no appreciable effect on the overall totals.

The foregoing statistics do not include bachelor of technology degrees, although some people think these should be counted as equivalent to engineering bachelor's degrees in assessing the supply of technologically educated manpower. There were 4,402 bachelor's of engineering technology and 2,135 bachelor's of industrial technology reported to the Engineering Manpower Commission (EMC) in the 1973 survey.

The actual number of graduates for 1973 was less than anticipated on the basis

TABLE 21

ENGINEERING DEGREES BY CURRICULUM AND LEVEL, 1972-73

CURRICULUM	BACHELOR'S	MASTER'S	ENGINEER	DOCTOR'S
Aerospace	1326	572	36	181
Agricultural	454	152	0	68
Architectural	419	25	0	0
Biomedical	103	123	0	46
Ceramic	191	39	0	22
Chemical	3586	986	33	405
Civil	7664	2697	59	432
Computer	568	589	0	96
Electrical	11844	4003	148	820
Engineering,General/Unified	2058	417	1	37
Engineering Mechanics	181	243	2	109
Engineering Physics	268	107	0	74
Engineering Science/Math	695	401	3	124
Environmental/Sanitary	150	511	3	51
Geological	132	52	1	18
Industrial/Manufacturing	2923	1831	12	147
Marine/Naval Arch./Ocean	413	165	31	18
Materials	98	183	4	125
Mechanical	8433	2107	59	411
Metallurgical	534	313	8	143
Mining/Mineral	201	45	3	13
Nuclear	324	387	15	115
Petroleum	328	93	2	17
Systems	180	430	0	72
Textile	25	16	0	0
Transportation	7	57	0	3
Welding	30	6	0	0
Other	166	55	0	17
Not specified	128	113	14	23
Total	43429	16718	434	3587
Women	524	202	6	39
U.S. Negroes	574	81	2	12
Spanish Surnamed	721	93	2	11
Asiatics	568	214	8	54
American Indians	36	15	0	1
Foreign Nationals	2136	2479	72	708

Note: Totals for women, minority groups, and foreign nationals include only numbers actually reported. The totals would be higher if all institutions had reported all categories.

of earlier projections. The U.S. Office of Education earlier this year had estimated totals of 44,560 bachelor's in engineering and 6,000 in technology, 16,550 master's, and 4,150 doctor's. A "minisurvey" of engineering deans made by EMC in April also indicated that more graduates were expected. There is no easily ascertainable explanation for the differences except the inherent difficulty of predicting the future behavior of large numbers of people.

Table 21 provides a breakdown of the 1973 degrees by curriculum and level. It is difficult to discern significant trends in individual curricula because the changes may be in opposite directions at different degree levels. The only curricula that showed increases at all levels were biomedical and general or unified engineering. Those that were consistently down included aerospace, ceramic, chemical, electrical, geological, and mechanical engineering; and engineering mechanics. At the bachelor's level, agricultural, architectural, civil, computer, environmental, mining, nuclear, petroleum, systems, and welding engineering showed increases despite the drop in all engineering curricula combined.

Table 22 presents a summary of degree statistics since 1949. There is a possible discontinuity between 1967 and 1968, the earlier data being taken from U.S. Office of Education reports and the later ones from EMC surveys. There are minor differences in the methodology of the two surveys, but these are believed to be insignificant in terms of the total numbers. However, care should be taken in attempting to make comparisons within or between individual curricula over past years, especially those with relatively few graduates, because much of the apparent change could actually be due to differences in the way data were reported.

This year fourteen schools reported 500 or more bachelor's degrees. As in 1972, Purdue led the list followed by the University of Illinois at Urbana, and

Table 22

ENGINEERING DEGREES, ALL U.S. INSTITUTIONS
1949-73[1]

Year Ended June 30	Bachelor's[2]	Master's[3]	Doctor's
1973	43,429	17,152	3,587
1972	44,190	17,356	3,774
1971	43,167	16,383	3,640
1970	42,966	15,548	3,620
1969	39,972	14,980	3,345
1968	38,002	15,152	2,933
1967	36,186	13,887	2,614
1966	35,815	13,677	2,303
1965	36,691	12,056	2,124
1964	35,226	10,827	1,693
1963	33,458	9,635	1,378
1962	34,735	8,909	1,207
1961	35,860	8,177	943
1960	37,808	7,159	786
1959	38,134	6,753	714
1958	35,332	5,788	647
1957	31,211	5,232	596
1956	26,306	4,724	610
1955	22,589	4,484	599
1954	22,236	4,177	590
1953	24,164	3,743	592
1952	30,286	4,141	586
1951	41,893	5,156	586
1950	52,732	4,904	494
1949	45,200	4,798	417

[1]Data since 1968 from Engineering Manpower Commission; for earlier years, from U.S. Office of Education.

[2]Includes four-year and five-year curricula.

[3]Includes other post-baccalaureate, pre-doctoral degrees; 508 in 1970, 494 in 1971, 353 in 1972, 434 in 1973.

Pennsylvania State moved up into third place among the following schools:

Purdue University	1017
University of Illinois at Urbana	854
Pennsylvania State University	709
Georgia Institute of Technology	705
University of Missouri at Rolla	682
Northeastern University	665
North Carolina State University	665
Newark College of Engineering	663
University of Michigan	645
Ohio State University	581
University of Minnesota	551
Iowa State University	547
Texas A&M University	547
University of Washington	544

The number of schools reporting 300 or more master's degrees decreased this year to eight, as follows:

Stanford University	580
University of California at Berkeley	483
New York University	473
Massachusetts Institute of Technology	422
University of Michigan	397
University of Illinois at Urbana	369
Purdue University	326
Polytechnic Institute of New York	322

M.I.T. also awarded 122 engineer degrees which, if added to the master's figures, would move that school into second place for intermediate degrees.

Only four schools reported over 100 doctorates:

Massachusetts Institute of Technology	166
University of California at Berkeley	161
University of Illinois at Urbana	148
Stanford University	142

In terms of total engineering graduates at all degree levels combined, Purdue and the University of Illinois again led the list of the "top ten" schools:

Purdue University	1441
University of Illinois at Urbana	1371
University of Michigan	1143
Massachusetts Institute of Technology	1091
University of California at Berkeley	1074
Pennsylvania State University	992
Georgia Institute of Technology	987
University of Missouri at Rolla	985
Northeastern University	977
Ohio State University	927

The number of degrees earned by women and minority members apparently increased significantly, but the totals shown in Table 21 must be regarded as minimum preliminary figures since they count only degrees actually reported and do not include estimates for schools that were unable or unwilling to disclose minority data. For the first time, this year the EMC survey sought data on all so-called "protected" minority groups and the statistics, although admittedly incomplete, are of great interest. It is hoped that more complete reporting of these data will occur in future years. Schools that do not keep or report data on minorities are perhaps under a mis-apprehension of the federal regulations under which employers are being called upon

to demonstrate "equal opportunity" and "affirmative action." Briefly, it is illegal to discriminate on the basis of race or ethnic group, but this does not preclude obtaining such information after the fact. However, it is recommended that records of racial, ethnic, and other characteristics related to anti-discrimination legislation be kept separate from other records maintained by the schools. Unless schools are prepared to provide accurate data, the engineering profession will have great difficulty in demonstrating its own record of encouraging the participation of women and minority members.

Another group, not a minority, consists of foreign nationals graduating from U.S. schools. The number of such graduates continues to be a significant factor in the potential manpower supply. Although the number of advanced degrees earned by foreign students is down slightly this year, the number of bachelor's degrees reported is up, and there is a general expectation that the proportion of foreign nationals will increase as the number of U.S. graduates decreases over the next few years. Many, of course, will not enter the U.S. working force.

Table 23 summarizes the number of graduates reported at each degree level by all U.S. engineering schools and also indicates control and engineering accreditation status. Note that ECPD accreditation at five schools (U. of Louisville, Cornell U., R.P.I., U. of North Carolina at Chapel Hill, and Rice U.) applies to the master's degree only. ECPD status is as published in the 1972 list of accredited curricula.

This year marks the last appearance of New York University and the first appearance of its successor, Polytechnic Institute of New York (formerly Polytechnic Institute of Brooklyn, with which N.Y.U. has now been combined.) It is significant that N.Y.U. produced the thirteenth largest number of engineering graduates this

TABLE 23

SUMMARY OF ENGINEERING DEGREES BY SCHOOL 1972-73

SCHOOL	CONTROL & ACCREDITATION	BACHELOR'S	MASTER'S	ENGINEER	DOCTOR'S
ALABAMA					
AUBURN U	SE	392	40		12
TUSKEGEE INST	IE	28	12		
U of ALABAMA BIRMINGHAM	SE	43	6		
U of ALABAMA HUNTSVILLE	SR	36	15		1
U of ALABAMA UNIVERSITY	SE	154	49		8
U of SOUTH ALABAMA	SR	49			
ALASKA					
U of ALASKA	SE	23	35	1	1
ARIZONA					
ARIZONA ST U	SE	149	101		17
U of ARIZONA	SE	211	94		15
ARKANSAS					
ARKANSAS POLY COLL	SR	7			
ARKANSAS ST U	SR	9			
JOHN BROWN U	IR	18			
U of ARKANSAS	SE	204			
CALIFORNIA					
CAL. INST of TECH	IE	48	72	8	37
CAL. MARITIME ACAD	SR	28			
CAL. ST POLY U POMONA	SE	299			
CAL. ST POLY U SAN LUIS OBIS.	SE	327	5		
CAL. ST U CHICO	SE	67			
CAL. ST U FRESNO	SE	69			
CAL. ST U FULLERTON	SR	35	23		
CAL. ST U HUMBOLDT	SR	13			
CAL. ST U LONG BEACH	SE	185	118		
CAL. ST U LOS ANGELES	SE	162	39		
CAL. ST U NORTHRIDGE	SR	54	21		
CAL. ST U SACRAMENTO	SE	100	35		
CAL. ST U SAN DIEGO	SE	103	40		
CAL. ST U SAN FRANCISCO	SE	34			
CAL. ST U SAN JOSE	SE	225	124		
HARVEY MUDD COLL	IE	18	6		
HEALD ENGINEERING COLL	PO	121			
LOYOLA MARYMOUNT U	RE	32	81		
NORTHROP INST of TECH	IE	111	4		
SAN DIEGO COLL of ENGRG	PO	5			
STANFORD U	IE	138	580	30	142
U.S.N. POSTGRAD. SCH.	FE	84	173	31	1
U of CAL. BERKELEY	SE	426	483	4	161
U of CAL. DAVIS	SE	196	78		34
U of CAL. IRVINE	SE	41	20		10
U of CAL. LOS ANGELES	SE	235	227		76
U of CAL. SAN DIEGO	SR	16	13		11
U of CAL. SANTA BARBARA	SE	81	52		11
U of the PACIFIC	IP	17			
U of REDLANDS	RR	5	7		
U of SANTA CLARA	RE	60	100	1	1
U of SOUTHERN CAL.	IE	126	198	25	50
WEST COAST U	IR	121	68		
WESTERN STATES COLL OF ENGRG	PO	29			
COLORADO					
COL. SCH of MINES	SE	206	64		15
COLORADO ST U	SE	146	92		43
U.S. AIR FORCE A	FE	189			
U of COLORADO	SE	348	90		24
U of DENVER	RE	48	23		2
CONNECTICUT					
BRIDGEPORT ENGRG INST	IO	45			
RENSSELAER POLY INST OF CONN	IR	-	114		
TRINITY COLL	IR	6			
U.S. COAST GUARD ACAD	FR	52			
U of BRIDGEPORT	IE	30	22		
U of CONNECTICUT	SE	176	111		19
U of HARTFORD	IE	53			
U of NEW HAVEN	IE	138	12		
YALE U	IR	27	21		15
DELAWARE					
U of DELAWARE	SE	150	41		15
DISTRICT OF COLUMBIA					
CATHOLIC U	RE	37	50		24
GEORGE WASHINGTON U	IE	47	240		8
HOWARD U	IE	87	33		
FLORIDA					
EMBRY-RIDDLE AERO. U	IR	21			
FLORIDA ATLANTIC U	SR	71	3		
FLORIDA INST OF TECH	IE	52	22		
FLORIDA TECH U	SE	86	38		
U of FLORIDA	SE	364	183	4	43
U of MIAMI	IE	109	35		
U of SOUTH FLORIDA	SE	115	29		
GEORGIA					
GEORGIA INST of TECH	SE	705	239		43
U of GEORGIA	SE	26	6		
HAWAII					
U of HAWAII	SE	150	46		
IDAHO					
IDAHO ST U	SR	20	1		
U of IDAHO	SE	112	39		5
ILLINOIS					
AEROSPACE INST	IO	14			
BRADLEY U	IE	89	37		
CHICAGO TECH COLL	IO	191			
ILLINOIS INST OF TECH	IE	253	131		31
MIDWEST COLL OF ENGRG	PR	2	20	2	
MILLIKIN U	RR	24			
NORTHWESTERN U	IE	137	131		73
PARKS COLL OF ST. LOUIS U	RR	94			
SOUTHERN ILLINOIS U	SE	61	24		
U of ILLINOIS CHICAGO	SR	309	43		8
U of ILLINOIS URBANA	SE	854	369		148
INDIANA					
INDIANA INST OF TECH	IR	97			
PURDUE U	SE	1017	326		98
ROSE-HULMAN INST OF TECH	IE	201	13		
TRI-STATE COLL	IE	193			
U of EVANSVILLE	RE	60			
U of NOTRE DAME	RE	180	48		25
VALPARAISO U	RE	83			
IOWA					
IOWA ST U	SE	547	124		52
U of IOWA	SE	104	69		17
KANSAS					
KANSAS ST U	SE	211	70		19
U of KANSAS	SE	184	58		17
WICHITA ST U	SE	79	10		
KENTUCKY					
U of KENTUCKY	SE	194	56		15
U of LOUISVILLE	SE	118	67		
LOUISIANA					
LOUISIANA ST U BATON ROUGE	SE	291	61		11
LOUISIANA ST U NEW ORLEANS	SR	27	2		
LOUISIANA TECH U	SE	182	32		1
McNEESE ST U	SR	27			
SOUTHERN U & A&M COLL	SE	46			
TULANE U	IE	92	64		6
U of SW LOUISIANA	SE	82	8		
MAINE					
MAINE MARITIME ACAD	SR	67			
U of MAINE	SE	145	12		4
MARYLAND					
JOHNS HOPKINS U	IE	137	51		43
LOYOLA COLL	RR	9			
U.S. NAVAL ACAD.	FE	183			
U of MARYLAND	SE	308	115		29
MASSACHUSETTS					
BOSTON U	IE	33	20		
HARVARD U	IE	14	44	1	31
LOWELL TECH INST	SE	310	50		
MASSACHUSETTS INST OF TECH	IE	381	422	122	166
MASSACHUSETTS MARITIME ACAD	SR	0			
MERRIMACK COLL	RE	41			
NORTHEASTERN U	IE	665	299	6	7
SOUTHEASTERN MASS. U	SE	49			
TUFTS U	IE	143	31		1
U of MASSACHUSETTS	SE	212	66		15
WESTERN NEW ENGLAND COLL	IE	77			
WORCESTER POLY INST	IE	318	64		9
MICHIGAN					
ANDREWS U	RR	0			
DETROIT INST of TECH	IR	92			
GENERAL MOTORS INST	IR	382			
LAWRENCE INST of TECH	IR	130			
MICHIGAN ST U	SE	421	112		29
MICHIGAN TECH U	SE	471	43		1
OAKLAND U	SE	71			
U of DETROIT	RE	163	29		4
U of MICHIGAN	SE	645	397	5	96
WAYNE ST U	SE	164	124		4
WESTERN MICHIGAN U	SR	25			

TABLE 23 (CONT.)

SCHOOL	CONTROL & ACCREDITATION	BACHELOR'S	MASTER'S	ENGINEER	DOCTOR'S
MINNESOTA					
U of MINNESOTA	SE	551	93		46
MISSISSIPPI					
MISSISSIPPI ST U	SE	224	44		7
U of MISSISSIPPI	SE	37	20		2
MISSOURI					
ROCKHURST COLL	RR	12			
U of MISSOURI COLUMBIA	SE	290	115		21
U of MISSOURI KANSAS CITY	SR	13			
U of MISSOURI ROLLA	SE	682	264		39
WASHINGTON U	IE	111	90		35
MONTANA					
MONTANA COLL MINERAL S&T	SE	51	6	5	
MONTANA ST U	SE	191	45		6
NEBRASKA					
U of NEBRASKA LINCOLN	SE	356	69		6
NEVADA					
U of NEVADA LAS VEGAS	SR	8			
U of NEVADA RENO	SE	69	21		1
NEW HAMPSHIRE					
DARTMOUTH COLL	IE	25	16	1	9
NEW ENGLAND COLL	IR	13			
U of NEW HAMPSHIRE	SE	91	27		1
NEW JERSEY					
FAIRLEIGH DICKINSON U	IE	167	62		
MONMOUTH COLL	IE	23	9		
NEWARK COLL of ENGRG	SE	663	161		7
PRINCETON U	IE	111	38		35
RUTGERS U	SE	186	61		21
STEVENS INST of TECH	IE	230	121		18
NEW MEXICO					
NEW MEX. INST MINING & TECH	SE	24	4		
NEW MEXICO ST U	SE	254	53		9
U of NEW MEXICO	SE	155	58		15
NEW YORK					
CITY COLL of CUNY	LE	366	104		6
CLARKSON COLL of TECH	IE	348	40		11
COLUMBIA U	IE	131	163	26	32
COOPER UNION	IE	94	62		1
CORNELL U	IE	426	241		84
HOFSTRA U	IE	56			
MANHATTAN COLL	RE	222	26		
NEW YORK U	IE	257	473	35	71
POLY INST of NEW YORK	IE	317	322	5	38
C.W. POST COLL of L.I.U.	IR	35	86		
PRATT INST	IE	171	69		
RENSSELAER POLY INST TROY	IE	431	263		47
ROCHESTER INST of TECH	IE	149	18		
SUNY BUFFALO	SE	248	103		25
SUNY MARITIME COLL	SE	42			
SUNY STONY BROOK	SE	118	165		17
SUNY COLL CERAMICS ALFRED	SE	68	3		5
SUNY COLL ENV. SCI. SYRACUSE	SR	77	10		6
SYRACUSE U	IE	137	134	1	21
UNION COLL	IE	80	32		3
U.S. MERCHANT MARINE ACAD	FR	99			
U of ROCHESTER	IE	38	55		28
WEBB INST of NAVAL ARCH.	IE	21			
NORTH CAROLINA					
DUKE U	IE	96	23		6
NORTH CAROLINA A&T ST U	SE	34	1		
NORTH CAROLINA ST U	SE	665	100	14	50
U of N.C. CHAPEL HILL	SE	-	10		3
U of N.C. CHARLOTTE	SR	33			
NORTH DAKOTA					
NORTH DAKOTA ST U	SE	153	23		
U of NORTH DAKOTA	SE	65	12		
OHIO					
AIR FORCE INST of TECH	FE	30	205		3
CASE WESTERN RESERVE U	IE	166	60		49
CLEVELAND ST U	SE	174	66		
MARIETTA COLL	IR	8			
OHIO NORTHERN U	RE	50			
OHIO ST U	SE	581	251	14	81
OHIO U	SE	133	46		4
U of AKRON	SE	129	28		1
U of CINCINNATI	SE	201	134		27
U of DAYTON	RE	117	83		
U of TOLEDO	SE	125	37		6
WRIGHT ST U	SR	17	11		
YOUNGSTOWN ST U	SE	122	13		
OKLAHOMA					
OKLAHOMA ST U	SE	283	134	1	32
U of OKLAHOMA	SE	220	65		24
U of TULSA	IE	104	35		3
OREGON					
OREGON ST U	SE	270	64	1	16
U of PORTLAND	IR	16	9		

SCHOOL	CONTROL & ACCREDITATION	BACHELOR'S	MASTER'S	ENGINEER	DOCTOR'S
PENNSYLVANIA					
BUCKNELL U	IE	55	13		
CARNEGIE MELLON U	IE	213	98		50
DREXEL U	IE	300	131		23
GANNON COLL	RE	31	4		
GENEVA COLL	RR	18			
GROVE CITY COLL	IR	51			
LAFAYETTE COLL	RE	112			
LEHIGH U	IE	300	106		35
PENNSYLVANIA ST U	SE	709	244		39
PHILA. COLL TEXTILES & SCI.	IR	19			
SWARTHMORE COLL	IE	14			
U of PENNSYLVANIA	IE	80	151		58
U of PITTSBURGH	SE	349	120		20
VILLANOVA U	RE	230	56		
WIDENER COLL	IE	33	12		
RHODE ISLAND					
BROWN U	IE	68	23		16
U of RHODE ISLAND	SE	158	38		14
SOUTH CAROLINA					
THE CITADEL	SE	47			
CLEMSON U	SE	206	62		16
U of SOUTH CAROLINA	SE	109	34		2
SOUTH DAKOTA					
S. DAK. SCH OF MINES & TECH.	SE	223	75		6
SOUTH DAKOTA ST U	SE	123	30		5
TENNESSEE					
CHRISTIAN BROTHERS COLL	RE	45			
MEMPHIS ST U	SE	64	20		
TENNESSEE ST U	SE	29			
TENNESSEE TECH U	SE	175	37		
U of TENN. CHATTANOOGA	SR	32			
U of TENN. KNOXVILLE	SE	401	117		24
VANDERBILT U	IE	165	42		10
TEXAS					
LAMAR U	SE	207	36		
LETOURNEAU COLL	IR	29			
PRAIRIE VIEW A&M COLL	SE	55			
RICE U	IE	113	17	62	29
ST. MARY'S U	RR	3	2		
SOUTHERN METHODIST U	RE	81	142	6	28
TEXAS A&I U	SE	120	56		
TEXAS A&M U	SE	547	259		59
TEXAS TECH U	SE	197	69		16
TRINITY U	IR	12			
U of HOUSTON	SE	149	53	20	13
U of TEXAS ARLINGTON	SE	248	41		6
U of TEXAS AUSTIN	SE	492	176		75
U of TEXAS EL PASO	SE	143	28		
U of TEXAS PERMIAN BASIN	SR	0			
UTAH					
BRIGHAM YOUNG U	RE	143	73		7
U of UTAH	SE	227	99	1	30
UTAH ST U	SE	71	59	1	14
VERMONT					
NORWICH U	IE	17			
U of VERMONT	SE	68	17		3
VIRGINIA					
HAMPTON INST	IR	22			
INST of TEXTILE TECH	IO	-	6		
OLD DOMINION U	SE	31	12		
U of VIRGINIA	SE	178	77		30
VIRGINIA MILITARY INST	SE	57			
VIRGINIA POLY INST & ST U	SE	477	142		30
WASHINGTON & LEE U	IR	3			
WASHINGTON					
GONZAGA U	RR	23			
ST. MARTIN'S COLL	RE	13			
SEATTLE U	RE	29	14		
U of WASHINGTON	SE	544	191		52
WALLA WALLA COLL	RR	17			
WASHINGTON ST U	SE	328	54		4
WEST VIRGINIA					
MARSHALL U	SE	14			
WEST VIRGINIA INST of TECH	SE	105			
WEST VIRGINIA U	SE	228	118		11
WISCONSIN					
INST of PAPER CHEMISTRY	IR	-	4		1
MARQUETTE U	RE	205	33		11
MILWAUKEE SCH of ENGRG	IR	108			
U of WISCONSIN MADISON	SE	475	178		69
U of WISCONSIN MILWAUKEE	SE	114	40		
U of WISCONSIN PARKSIDE	SR	28			
U of WISCONSIN PLATTEVILLE	SR	80			
WYOMING					
U of WYOMING	SE	137	35	1	1
PUERTO RICO					
U of PUERTO RICO	SE	141	13		

LETTERS AFTER NAME OF SCHOOL INDICATE CONTROL & ENGINEERING ACCREDITATION

CONTROL: F = FEDERAL
S = STATE
L = LOCAL GOVERNMENT
I = INDEPENDENT NONPROFIT
R = RELIGIOUS
P = PRIVATE, OTHER

ACCREDITATION: E = ECPD (ONE OR MORE CURRICULUM)
R = REGIONAL ASS'N
O = OTHER OR UNKN.

year despite its well-publicized troubles. Two other schools, Marshall University and the University of Denver, have reported that they are phasing out their engineering programs and will produce no further graduates after 1975. Two schools with marine engineering programs, California Maritime Academy and Massachusetts Maritime Academy, are reported to be upgrading their engineering curricula to four-year standards. For this reason Massachusetts Maritime produced no graduates this year.

Other changes from 1972 include the addition of the State University of New York College of Environmental Science and Forestry at Syracuse and the University of Wisconsin Parkside campus.

Tables 24 through 27 give the detailed breakdown of degrees by school and curriculum at the bachelor's, master's, engineer, and doctor's levels. Specifics regarding curricula grouped as "OTHER" in the basic tables will be found after Table 27.

TABLE 24

ENGINEERING BACHELOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																													
Auburn U	29	8		28	83		113							51		5	74						1	392	3	4	2	1	0	10
Tuskegee Inst							22										6							28	0	24	0	0	0	4
U of Alabama-Birmingham								43																43						
#U of Alabama-Huntsville							21		3		6			6										36						
U of Alabama-University	3			14	31		32							23			35	8	8					154	1	1	0	0	0	2
#U of South Alabama				12	7		15										15							49	0	0	0	0	0	1
ALASKA																														
U of Alaska					11		5						2				2		3					23	0					
ARIZONA																														
Arizona St U				10	27		52		3		21						36							149						
U of Arizona	17	1		14	28		56			8	4		9				39	6	12	6		11		211	7	0	8	2	0	14
ARKANSAS																														
#Arkansas Poly Coll								7																7						
#Arkansas St U		9																						9						
#John Brown U					8		8										2							18	0	0	0	1	0	0
U of Arkansas		7		17	47		63							29			41							204	1	0	1	0	0	2
CALIFORNIA																														
Calif Inst of Tech				3				40		5														48	0	0		0	0	9
#Calif Maritime Acad															28									28	0	0	1	1	0	0
Cal St Poly U-Pomona	22			17	60		123							21			56							299	1	5				64
Cal St Poly U-San Luis Ob	34	10			16		112					16		27			77	4					31	327	0					40
Cal St U-Chico					39		11				4						13							67	0	0	0	0	0	10
Cal St U-Fresno		1			31		27							4			6							69	0	0			0	
#Cal St U-Fullerton					7		18										10							35	0	0	1	2	0	2
#Cal St U-Humboldt					2						1	10												13	1	0	0	0	0	0
Cal St U-Long Beach				7	66	4	56							12	2	2	36							185						
Cal St U-Los Angeles								162																162	1	4	22	39	0	11
#Cal St U-Northridge								54																54	0	0	0	0	0	0
Cal St U-Sacramento					33	5	42										20							100						
Cal St U-San Diego								103																103	1					
Cal St U-San Francisco								34																34	1	1	3	3	0	10
Cal St U-San Jose				8	45		89	13						28		7	35							225	1	1	7	5		52
Harvey Mudd College								18																18	0	0	0	3	0	1
#Heald Engineering Coll					20		61										32						8	121	0	8	10	13	0	53
Loyola Marymount U					13		12										7							32	0	0	0	0	0	4
Northrop Inst of Tech	27					5	51				6						22							111	3	2	2	7	0	18
#San Diego Coll of Engr							5																	5	0	0	0	0	0	0
Stanford U				13	31		34	22						14		1	15						8	138	3	6	3	8	0	11
U.S. Naval Postgrad Sch	2						40				36						6							84	0	0	0	0	0	35
U of Cal-Berkeley			6	41	74		189			6	6		2	20		1	76	5						426	5	7	4	55		137
U of Cal-Davis	2	6		24	60		51	2								2	49							196	3	1	4	11	0	14
U of Cal-Irvine					14		22	1									4							41	3	0	4	0	0	0
U of Cal-Los Angeles								235																235	5					
#U of Cal-San Diego			4						10													2		16	0	0	0	0	0	0
U of Cal-Santa Barbara				10			31										31			9				81	2	1	1	3	0	8
U of the Pacific					9		8																	17	1	0	0	0	0	3
#U of Redlands						1		4																5	0	1	0	0	0	0
U of Santa Clara					20		30	1									9							60	0	0			0	
U of Southern California	4			16	29		40		7					6			16				8			126						
#West Coast U						21	61			6	3						30							121	2	4	7	5		30
#Western Sts Coll of Engrg							29																	29	0	4	2	0	3	13
COLORADO																														
Colorado Sch of Mines				9									28					30	37		20		82	206	5	1	1	0	0	8
Colorado St U		9			52		37				9						39							146	0	0	2	2	0	1
U.S. Air Force Acad	51				55		30		43		10													189	0	1	2	1	0	1
U of Colorado	25			35	58	11	106	11		9	20						51						22	348	8	2	1	11	0	9
U of Denver				3	17		12							6			10							48	0	0	2	2	0	2
CONNECTICUT																														
#Bridgeport Engrg Inst								21									24							45	0	0	0	0	0	1
#Rensselaer Poly of Conn.	NO BS PROGRAMS - SEE MS TABLE																							0						
#Trinity College								6																6	0	0	0	0	0	1
#U.S. Coast Guard Acad					13		14	11							12					2				52	0					
U of Bridgeport							13										14						3	30						3
U of Connecticut				19	68	7	49										33							176	1					5
U of Hartford					2		23					1					27							53	0	2	0	1	0	2
U of New Haven					17		46							22		3	50							138	0	0	0	0	0	4
#Yale U											27													27						
DELAWARE																														
U of Delaware				36	34		34							21			25							150	3					
DISTRICT of COLUMBIA																														
Catholic U	6			3	6		15									1	6							37	3	0	0	0	0	9
George Washington U					8		25										14							47	0		0			6
Howard U				4	23		35										25							87	1	35	0	0	0	52
FLORIDA																														
#Embry-Riddle Aero U	21																							21	0	0	1	0	0	1
#Florida Atlantic U							30								35		6							71	0	1	10	0	0	0
Florida Inst of Tech							34								1		17							52						
Florida Tech U						2	26					23		16		4	15							86	0	0	0	3	0	2
U of Florida	12	6		23	66		114				17			45			66	5		10				364	7	5	43	19	0	62

TABLE 24 (Cont.)

ENGINEERING BACHELOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
FLORIDA (CONT.)																														
U of Miami					33		37				1			9			24						5	109						
U of S Florida				8			32				47			14			14							115	0	1	15	0	0	5
GEORGIA																														
Georgia Inst of Tech	58			68	95		181				12			171			110						10	705	10	2	3	2	0	5
U of Georgia		26																						26	0	0	1	1	0	0
HAWAII																														
U of Hawaii					47		64	11									28							150	5					
IDAHO																														
#Idaho St U								9						4						7				20		1				
U of Idaho		7		14	35		23						7				18	4	4					112	0	0	1	2	0	4
ILLINOIS																														
#Aerospace Inst	14																							14	0	3				3
Bradley U					21		27							18			23							89	0	3	0			2
#Chicago Tech Coll					26		71							2			64						28	191	0	22	18	2	0	74
Illinois Inst of Tech				34	24		80				2			19			68	16					10	253	3					
#Midwest Coll of Engrg																	2							2						
#Millikin U														20									4	24	1					
Northwestern U			5	23	17	5	38				10			17		4	18							137	9	3				11
#Parks Coll St. Louis U	94																							94	0	1	1	2	0	5
Southern Illinois U								61																61						14
#U of Illinois-Chicago	9		14	23	30	38	79		6	2		11		6			36	10				45		309	5					
U of Illinois-Urbana	46	28		39	145	56	250	57	12	26				40			121	18					16	854	13	8				
INDIANA																														
#Indiana Inst of Tech	2			23	20		21										31							97	0	2	0	1	0	29
Purdue U	102	18		63	129		227	144			12			118			188	16						1017	15	9	0	14	0	16
Rose-Hulman Inst of Tech	3		16	39	22		49										72							201	0	1	0	0	0	1
Tri-State Coll	6			14	51		48										74							193	0	0	0	0	0	15
U of Evansville							34							8			18							60	0	0	0	1	0	5
U of Notre Dame	21			24	55		33				4			18			14	6		5				180	0	2	3	0	0	0
Valparaiso U					36		27										20							83	1			1		
IOWA																														
Iowa St U	30	31		47	87		86			40	11			50			56	6					103	547	7					
U of Iowa				14	18		34	1						11			26							104	1	0	1	2	0	2
KANSAS																														
Kansas St U		15		21	35		63							14			42			21				211	2	1	0	0	0	13
U of Kansas	30			18	36		51			7							36				2		4	184	1	0	0	1	0	12
Wichita St U	18						20							13			28							79						4
KENTUCKY																														
U of Kentucky		2		18	72		48										50	4						194	2					
U of Louisville				7	7		12	83									9							118	1	0	0	0	0	4
LOUISIANA																														
LSU-Baton Rouge	12	8		52	30		66				8			35			48				32			291	3	4	8	0	0	57
#LSU-New Orleans							13				4						10							27		1				
Louisiana Tech U		2		27	19	32	39						6	11			40				6			182	3	5				
#McNeese St U				7	1		10										9							27	1	1	0	0	0	1
Southern U & A&M Coll					9		22										15							46	1	64	0	0	0	0
Tulane U				7	16		21	16									32							92	2	2	1	1	0	5
U of SW Louisiana				8	12		21										26				13			82						
MAINE																														
#Maine Maritime Acad															67									67						
U of Maine		3		12	46		35			12							37							145						4
MARYLAND																														
Johns Hopkins U				1	14		58		7		3			29			25							137				1		
#Loyola College										9														9						1
U.S. Naval Acad	41						26	17							48		39					12		183	0	2				2
U of Maryland	28	1		23	60		127									1	61			3			4	308	1	3				
MASSACHUSETTS																														
Boston U	11		4											6								12		33	1	0	0	0	1	1
Harvard U								14																14	0	1	0	1	0	0
Lowell Tech Inst				23	73		96										71			42			5	310	5	1	1	0	0	0
M.I.T.	16			34	37		219									7	52	16						381	16	9	3	23	0	31
#Mass Maritime Acad	NO GRADUATES THIS YEAR BECAUSE OF CHANGE FROM 3-YEAR TO 4-YEAR PROGRAM																							0						
Merrimack Coll					21		10							10										41	0	0	0	1	0	0
Northeastern U				60	147		238							85			135							665	6					19
Southeastern Mass. U						11	25							2			11							49	0	0	0	0	0	1
Tufts U				18	50		41	23									11							143	2					7
U of Massachusetts	3			18	65	8	46							24			48							212	4	2	0	0	0	6
Western New England Coll							30							20			27							77	1	0	1	0	0	2
Worcester Poly Inst			1	47	92		83							16			79							318	18	2	3	4	0	12
MICHIGAN																														
#Andrews U	NO GRADUATES THIS YEAR																							0						
#Detroit Inst of Tech					17		40										35							92						80
#General Motors Inst							44							131			207							382	0	1	0	2	2	15
#Lawrence Inst of Tech					12		58										60							130						
Michigan St U		11		39	88	74	106										81	6				16		421	19	12				10
Michigan Tech U				17	101		102						10				171	43	7					471	10	0	5	2	14	24
Oakland U								71																71						
U of Detroit				22	24		48	4									65							163	1	2				3
U of Michigan-Ann Arbor	56			45	60	22	112	17	12	5	30	12		64	36	5	99	11		26			33	645						

TABLE 24 (Cont.)

ENGINEERING BACHELOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
MICHIGAN (CONT.)																														
Wayne St U				14	19		61							16			48	6						164	4	3				
#Western Mich U														25										25						
MINNESOTA																														
U of Minnesota	25	12		54	135	22	145						3				142	7	6					551	2	1	3	5	0	35
MISSISSIPPI																														
Mississippi St U	15	2	2	29	33		54							28		3	26			11	21			224	3	4	1			8
U of Mississippi				6	7		11	2					1				10							37	1	3	0	0	0	8
MISSOURI																														
#Rockhurst Coll											12													12	0	0	1	0	0	6
U of Mo-Columbia		9		23	76		103							34			45							290	0	1	0	0	0	16
#U of Mo-Kansas City								13																13	0	0	0	0	0	0
U of Mo-Rolla	3			47	157		146		1				9	89			156	33	12		18		11	682						
Washington U				21	8	28	36	1		5							12							111	12	6	0	3	0	8
MONTANA																														
Montana Coll Mineral Sci											5	3	10					4	18		11			51	2	0	0	0	0	6
Montana St U		8		35	43		58				1			15			31							191	4					3
NEBRASKA																														
U of Nebraska		14		28	93	28	114							10			69							356	8					43
NEVADA																														
#U of Nevada-Las Vegas								8																8	0	1	0	0	0	0
U of Nevada-Reno				5	19		18				3		5				8	2	9					69	2			2	1	2
NEW HAMPSHIRE																														
Dartmouth Coll								25																25	0	0	0	0	0	3
#New England Coll					12									1										13	0	0	0	0	0	1
U of New Hampshire				7	19		35										30							91	2	1	1	1	1	4
NEW JERSEY																														
Fairleigh Dickinson U							106							25			36							167	1	5	4	5	0	0
Monmouth Coll							23																	23	0	1	0	0	0	0
Newark Coll of Engr				77	146		158				26			92			164							663	14	8				20
Princeton U	18			25	26		29	13																111	1	6	0	2	0	13
Rutgers U		1		21	23		53							30			41						17	186	2	2	0	0	0	5
Stevens Inst of Tech								230																230	0	2	4	6	0	13
NEW MEXICO																														
NM Inst of Min & Tech												4						5	10		4		1	24	1	1	0	0	0	3
New Mexico St U		6		23	52		94						1	26			52							254	3		42			15
U of New Mexico				15	38		61										41							155	0	0	17	0	0	9
NEW YORK																														
City Coll of CUNY				35	58		187										86							366	5	20	20	75	0	0
Clarkson Coll of Tech				69	96		105	1									77							348	7	0	0	0	0	2
Columbia U				28	26		32							19			14	2	3	7				131						
Cooper Union				19	16		23				1						35							94	2	0	0	1	5	5
*Cornell U		6		48	82		108	55		39			1	49		4	34							426	7				0	
Hofstra U							21		4		23			9										56	0	0	2	1	0	0
Manhattan Coll				38	81		66										37							222	0	1	3	1	0	4
New York U	27			26	35		80				5			28			26	2		6			22	257						
Poly Inst of New York	19			27	43		131										49	4				44		317	8	9	6	12	0	6
#C.W. Post Coll of LIU											35													35	0	0	1	0	0	2
Pratt Inst				13		14	59							20			44						21	171						
*Rensselaer Poly Inst-Troy	3		19	35	54		114		1		14	35		43		14	82			16				431	7	5	2	6	0	17
Rochester Inst of Tech							72							17			60							149	0	0	0	1	0	0
SUNY Buffalo	7			20	66		78	10			3			12			43			9				248						
SUNY Maritime Coll															42									42	0	0	0	0	0	0
SUNY Stony Brook						15		78			25													118						
SUNY Coll Ceramics-Alfred																							68	68	1	0	0	1	0	1
#SUNY Coll Env Sci & Forest																							77	77	1	0	0	1	0	0
Syracuse U	5			12	43	7	32					4		13			21							137	3	1	1	0	0	6
Union Coll					29		35										16							80	1	0	0	2	0	0
#US Merchant Marine Acad															99									99	0	1	1	0	1	1
U of Rochester				5			15	1									13						4	38	0	2				2
Webb Inst of Naval Arch															21									21	0	0	0	0	0	0
NORTH CAROLINA																														
Duke U			12		27		28	1									28							96	2	1				4
North Carolina A&T St U							14			1	2						12						5	34	2	32	0	0	0	1
North Carolina St U	30	14		41	148		128	86	4					55		13	93			26			27	665	5	10	1	0	0	17
U of NC-Chapel Hill	NO BS PROGRAMS - SEE MS & PHD TABLES																							0						
#U of NC-Charlotte					8		19				6													33	0	1	0	0	0	1
NORTH DAKOTA																														
North Dakota St U		17			35		44							20			37							153	0	0	0	0		1
U of North Dakota				7	14		14						1	8			21							65	2	0	0	0	0	4
OHIO																														
Air Force Inst of Tech							30																	30	0					0
Case Western Reserve U			1	41	9	11	43	26									23	1				11		166						
Cleveland St U			2	22	18		53	32		6				11			24	6						174	2					
#Marietta Coll																						8		8	0	0	0	0	0	0
Ohio Northern U					14		26										10							50			1			
Ohio St U	34	20		51	96	50	130			14				47			91	20					28	581	7	3	0	10	0	12
Ohio U				16	41		31							13			32							133						
U of Akron				20	18		40										51							129	2	1	0	0	0	6
U of Cincinnati	31			39	44		91	2									57	17						281	2	3	0	0	0	0

TABLE 24 (Cont.)

ENGINEERING BACHELOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER?	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
OHIO (CONT.)																														
U of Dayton				10	33		36							8			30							117	1					10
U of Toledo				15	21		34			3				17			35							125	1	1				8
#Wright St U										2												15		17	0	0	0	0	0	0
Youngstown St U				12	21		31							16			32	10						122	2					11
OKLAHOMA																														
Oklahoma St U	8	11		33	23		79	4						54			67						4	283	2	1	1	0	3	26
U of Oklahoma	9			28	21		48			6	19		3	25			30	7		1	23			220	3	0	0	2	1	33
U of Tulsa	5			21			11			1	5		11				18				32			104	2	2			1	29
OREGON																														
Oregon St U	2	5		29	63	17	55	17		9				12			46	6		9				270	5	1	2	9	0	31
#U of Portland							6	3									7							16						
PENNSYLVANIA																														
Bucknell U				10	19		8										18							55	0	0	0	0	0	0
Carnegie Mellon U				41	20		81					1					58	12						213	9	1	0	3	0	6
Drexel U				34	52		105										99	10						300	4	8		1		
Gannon Coll							17										14							31	0	4	0	3	0	1
#Geneva Coll					6			5						7										18	0	0	0	0	0	1
#Grove City Coll				17			9										13	12						51	0	0	0	0	0	0
Lafayette Coll				16	27		39										19	11						112	0	1	0	0	0	4
Lehigh U				53	49		61		3	11				38			52	33						300	1	1	1	2	1	10
Pennsylvania St U	27	23		49	117		155		33		21			61			108	21	17	21	15		41	709	11	5	1	0	1	17
#Phila. Coll of Textiles																							19	19	0	0	0	0	0	6
Swarthmore Coll								14																14	1	0	0	0	0	2
U of Pennsylvania				20	10		36										11	3						80	0	2				4
U of Pittsburgh	9			26	75		98							33			88	15			5			349	2	1	0	0	0	7
Villanova U				32	69		77										52							230	1	2	1	0		11
Widener Coll								33																33	0	1	2	1	0	4
RHODE ISLAND																														
Brown U	4		8		15	1	8	6				1				6	10						9	68	0	4	0	0	0	0
U of Rhode Island				17	46		44				4			21			26							158	1					5
SOUTH CAROLINA																														
The Citadel					30		17																	47	0	0	0	0	0	1
Clemson U		5		27	49		64	8									38						15	206	3					6
U of South Carolina				16	33		33										27							109	0	0	1	0	0	4
SOUTH DAKOTA																														
SD Sch of Mines & Tech				30	52		45						17				59	10	10					223	4	0	0	0	0	29
South Dakota St U		13			45		30			6							29							123	1	0	0	0	0	1
TENNESSEE																														
Christian Brothers Coll				9	10		19										7							45	1	3	0	1	0	3
Memphis St U					12		34										18							64	4					
Tennessee St U					5		11										8						5	29	0	29	0	0	0	0
Tennessee Tech U				14	43		27				14			26			51							175	1	2	0	0	0	14
#U of Tenn-Chattanooga								24						8										32	0	0	0	0	0	1
U of Tenn-Knoxville	10	11		49	53		130			14	7			51			63	5		8				401	3	4				
Vanderbilt U			3	16	42	13	36		1		23	2				12	17							165	11	3				5
TEXAS																														
Lamar U				33	27	1	36				38			32			40							207	20	1				7
#LeTourneau Coll	4						2							3			13						7	29	0	0	0	0	1	0
Prairie View A&M Coll					6		27										16						6	55	1	55	0	0	0	0
#Rice U				22	12		55					10				1	13							113	2	0	2	2	0	4
#St. Mary's U														3										3	0	0	1	0	0	1
Southern Methodist U					8	1	26	1						10			23					12		81	4	1				3
Texas A&I U				42			28	33													17			120	0	2	26	0	0	39
Texas A&M U	43	21	6	51	118		91						3	54	15		97			29	19			547	2					
Texas Tech U		4		22	22		52			13				14			56				14			197	3	0	1	1	0	11
Trinity U					8						4													12			1			
U of Houston				15	24		47							29			34							149	4					
U of Texas-Arlington	17				43		82							37			69							248	2		5			18
U of Texas-Austin	29			70	77		178				15						110				27		36	492	1	1				
U of Texas-El Paso					32		51							7		33	20							143	2		50			20
#U of Texas Permian Basin	NEW PROGRAMS - NO GRADUATES YET																							0						
UTAH																														
Brigham Young U				15	33		48						1				46							143	1	0	1	0	0	13
U of Utah				19	34	51	68						2			2	38	5	8					227						
Utah St U					28		20							13			10							71	0	0	0	0	0	8
VERMONT																														
Norwich U					7		2							3			5							17	0					0
U of Vermont					28		24							4			12							68	1	0				3
VIRGINIA																														
#Hampton Inst					3		13							6										22	0	16				3
#Inst of Textile Tech	NO BS PROGRAMS - SEE MS TABLE																							0						
Old Dominion U					14		11										6							31	0	0	0	0	0	0
U of Virginia	24			13	25		27				29						30			30				178	1	4	0	0	0	0
Virginia Military Inst					43		14																	57	0	0	0	0	0	2
Virginia Poly Inst & St U	23	9		36	99		94		16					79			101	7	7				6	477						
#Washington & Lee U										3														3	0	0	0	0	0	0
WASHINGTON																														
#Gonzaga U					9		4				5						5							23						1
St. Martin's Coll					13																			13	0	0	0	0	0	6

TABLE 24 (Cont.)

ENGINEERING BACHELOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
WASHINGTON (CONT.)																														
Seattle U					9		12	2									8							29	2	0	1	1	0	2
U of Washington	27			26	94		163	2						41			155	17	3				16	544	11	2	1	26	1	43
Walla Walla Coll					7		9										1							17	0	0	0	0	0	4
Washington St U		7		22	45		46					17					44	3					144	328						
WEST VIRGINIA																														
Marshall U					9			5																14						
West Va Inst of Tech				20	27		31										27		16					105	1					4
West Virginia U	12	5		17	48		49							30			43		16		8			228						
WISCONSIN																														
#Inst of Paper Chemistry	NO BS PROGRAMS - SEE MS TABLE																							0						
Marquette U					66		80										59							205	1	3	0	0	0	10
#Milwaukee Sch of Eng							65										43							108		1				1
U of Wis-Madison		18		83	78		128		8					33			92	14	1	20				475	2	0	0	0	0	23
U of Wis-Milwaukee					17	7	34		7			8		8		6	27							114	3					
#U of Wis-Parkside											28													28	0	0	1	0	0	0
U of Wis-Platteville					68									2					10					80	0	1	0	0	0	4
WYOMING																														
U of Wyoming		5		13	38		32	1									23				25			137	0	1	1	1	0	27
PUERTO RICO																														
U of Puerto Rico				58	112		64							44			61							343	14					41
TOTAL U.S.	1326	454	103	3586	7664	568	11844	205	181	268	695	150	132	2921	411	98	8433	534	201	324	328	180	966	43629	524	574	72	356	62	1136

#These schools NOT on list of schools having at least one curriculum accredited by Engineers' Council for Professional Development.
*ECPD accreditation at master's level only.

TABLE 25

ENGINEERING MASTER'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																													
Auburn U	1	1		3	6		16							5			8							40						3
Tuskegee Inst							2										8			2				12	0	3	0	0	0	9
U of Alabama-Birmingham								6																6						
U of Alabama-Huntsville							2		4		2			7										15						
U of Alabama-University	1			1	8		17		5					10			5	2						49	0	0	1	0	0	6
ALASKA																														
U of Alaska					3		1						4	22					2				1	33	1					
ARIZONA																														
Arizona St U				4	5		32	25	4					20			10							101						
U of Arizona	9	2		4	13		31						4				14	3	1	4		9		94	1	0	2	2	0	20
CALIFORNIA																														
Cal Inst Tech	14			3	3		16		3	6	11	6					10							72	0	0		1	0	18
Cal Poly St U-San Luis Ob								5																5	0					2
Cal St U-Fullerton					3		7				1						1					11		23	0	0	0	0	0	0
Cal St U-Long Beach					40		33	22									23							118						
Cal St U-Los Angeles					9		23										7							39	0	3	2	0	0	7
Cal St U-Northridge								21																21						
Cal St U-Sacramento					15		13										7							35						
Cal St U-San Diego	4				6		24										6							40	0					
Cal St U-San Jose				6	33		59							13		6	7							124	1		1	6		19
Harvey Mudd Coll								6																6	0	0	0	1	0	0
Loyola Marymount U					32	6	33										10							81	0	0	0	3	0	28
Northrop Inst of Tech	2										2													4	0	0	0	0	0	2
Stanford U	32			10	152		170	16	10		1			47		9	64				9	60		580	14	8	8	16	22	205
US Naval Postgrad Sch	50						92										31							173	0	0	0	0	0	29
U of Cal-Berkeley				20	184		139							37	11	19	64			9				483	4	3	1	31	11	192
U of Cal-Davis		6		8	21		14				9						20							78	0	0	0	5	0	9
U of Cal-Irvine					8		11	1																20		1		1		1
U of Cal-Los Angeles						46	35	66	16							5	32					27		227						
U of Cal-San Diego	3		5						2	3														13	1	0	0	0	0	4
U of Cal-Santa Barbara				11			37										4							52			1	1		9
U of Redlands								7																7	1	0	0	0	0	0
U of Santa Clara							67	9			15						9							100	1	1	0		0	
U of Southern California	9		13	12	28		65					9		16	2	6	30					8		198						
West Coast U																						68		68						
COLORADO													14						12		4		33	64	1		1			22
Colorado Sch of Mines				1								13					23							92	0	0	1	0	0	31
Colorado St U		5			38		13										5							90	2	0	0	0	0	23
U of Colorado	10			7	24		30	7	2		5						3							23	1	1	0	3	0	5
U of Denver				6	6		8																							
CONNECTICUT																														
Rensselaer Poly Inst Conn	1		1			32	3		9								33	25		2		7	1	114	4	1	2			1
U of Bridgeport							11										6						5	22						5
U of Connecticut	2			12	39	9	26										18	5						111						28
U of New Haven														12										12	0	0	0	0	0	4
Yale U											21													21	1					9
DELAWARE																														
U of Delaware				13	11		8										9							41	3					
DISTRICT OF COLUMBIA																														
Catholic U	9			2	11		8								11	2	2			3			2	50	1	1	0	0	0	10
George Washington U	3		9		7	33	58		1			2		86	5		13					23		240	8		4			22
Howard U					21		4										8							33	1	18	0	0	0	15
FLORIDA																														
Florida Atlantic U															3									3	0	0	0	0	0	0
Florida Inst of Tech							13					8					1							22						
Florida Tech U						6	12					4		11			5							38	1	0	0	0	0	0
U of Florida	4	5		4	22		34				10	50		16			9	15		14				183	3	1	21	24	0	45
U of Miami			6		7		5							5	7		5							35						
U of South Florida							8				11			8			2							29	1	1	5	0	0	0
GEORGIA																														
Georgia Inst of Tech	22			9	43		34				4	13		35			22	9		39			9	239	2	0	2	2	0	25
U of Georgia		6																						6	0	0	0	0	0	2
HAWAII																														
U of Hawaii			3		13		14								8		8							46	0			40E		2
IDAHO																														
Idaho St U																				1				1						
U of Idaho		1		9	11		12										4	2						39	1	0	3	2	0	8
ILLINOIS																														
Bradley U					2		2		2					30			1							37	2	0	2			4
Illinois Inst of Tech				12	24		33					5		36			12	4			4		1	131	2					
Midwest Coll of Engr					1		11							8										20				3		
Northwestern U			11	17	11	11	14				1	11		18		12	6			8			11	131	4					52
Southern Illinois U								24																24						8
U of Ill-Chicago Circle						18											25							43	0					
U of Illinois-Urbana	7	6		16	83	26	73		5	52		27		8			26	10		25			5	369	6	5				
INDIANA																														
Purdue U	26	8		14	96		83	13						38			30	8		10				326	3	3	1	0	0	36
Rose-Hulman Inst Tech			3		1		7										2							13	0	0	0	0	0	0
U of Notre Dame	2			6	4		9				6	6					7	8						48	0	0	0	0	0	15

TABLE 25 (Cont.)

ENGINEERING MASTER'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
IOWA																														
Iowa St U	6	9	2	12	27		29		4			10		9			4	3		7			12	124	0					22
U of Iowa				4	4		6		11					24			9			1				69				2		
KANSAS																														
Kansas St U		3		2	11		9				2			25			12			6				70	0	0	0	0	0	37
U of Kansas	3			4	6		14	7	1			20					2				1			58	1	2	0	0	0	17
Wichita St U	4																6							10				1		3
KENTUCKY																														
U of Kentucky		2		12	18		11		3								6	2		2				56						
*U of Louisville				15	14		23				1	5					9							67	0	0	0	0	0	9
LOUISIANA																														
La. St U-Baton Rouge		2		15	2		15				3			8			6			3	7			61						
La. St U-New Orleans								2																2						
Louisiana Tech U		2		6	5		7						2	4			6							32	0	0				
Tulane U				7	17		10										17					13		64	1	0	0	0	0	20
U of Southwestern La.				1	3		1														3			8						
MAINE																														
U of Maine		1		2	6												3							12						1
MARYLAND																														
Johns Hopkins U			1				30		4			6		10										51	3					7
U of Maryland	3			19	27		54										12							115						
MASSACHUSETTS																														
Boston U	3													15								2		20	0	0	0	1	0	6
Harvard U											44													44	3	0	0	0	0	11
Lowell Tech Inst				8		4	16										13			1		4	4	50	4	0	0	0	0	0
M.I.T.	45			42	53		114								45		71	20		32				422	13	3	6	10	0	104
Northeastern U				3	39		125							100			32							299	0					12
Tufts U				3	13		5	4									6							31						
U of Massachusetts				11	16		6					7		7	5		14							66	0	0	0	0	0	8
Worcester Poly Inst		4		7	11		15							3		2	22							64	3	0	1	0	0	20
MICHIGAN																														
Michigan St U		7		8	17	15	23		2			10				1	11	7				11		112	2	2				26
Michigan Tech U				4	10	9		5								7	8							43	3				1	7
U of Detroit								29																29	0	0				11
U of Michigan-Ann Arbor	16		11	18	28	41	62		5			23		55	44	4	47	8		18			17	397						
Wayne St U				12	28		21							24			33	6						124	2	1				
MINNESOTA																														
U of Minnesota	4	3		8	14		24						7	13			18	1	1					93	0	0	1	3	0	15
MISSISSIPPI																														
Mississippi St U	9	4			9		9							4		2	3			2	2			44						6
U of Mississippi											20													20	0	0	0	1	0	15
MISSOURI																														
U of Missouri-Columbia		4		3	24	4	46							10			19			5				115	1	0	0	0	0	23
U of Missouri-Rolla	3			13	55		26		12			2	2	103			27	8	2	6			5	264						
Washington U				14	5	11	30		1			11				1	10					6	1	90	3	0	0	2	0	34
MONTANA																														
Montana Coll Mineral Sci											1		2					2	1					6	0	0	0	0	0	1
Montana St U		1		9	11		6							10			8							45						14
NEBRASKA																														
U of Nebraska		4		6	15	17	13		4					1			9							69	0					11
NEVADA																														
U of Nevada-Reno					2		7										4	6	2					21			1			10
NEW HAMPSHIRE																														
Dartmouth Coll								16																16	1	0	0	1	0	4
U of New Hampshire				5	1		9										12							27	0					4
NEW JERSEY																														
Fairleigh Dickinson U							43										19							62	0	2	2	2	0	6
Monmouth Coll							9																	9	0	0	0	0	0	0
Newark Coll of Engr				22	43		24				12			41			19							161	6	2				33
Princeton U	20			2	6		10																	38	2	0	0	1	0	14
Rutgers U			2	4	14		15		1			7		9			7						2	61	0	0	0	0	0	32
Stevens Inst of Tech				14		37	24								14		21	11						121	0	1	0	0	0	24
NEW MEXICO																														
NM Inst of Min & Tech																		2	2					4	0	0	0	0	0	2
New Mexico St U				2	13		24										14							53	1		2			11
U of New Mexico				1	6		29										8			14				58	0	0	3	0	0	7
NEW YORK																														
City Coll of CUNY				6	27		30										41							104	1	2	2	8	0	10
Clarkson Coll of Tech				6	9		12				9						4							40	0					3
Columbia U				11	39		49							25	2		19	3	9	6				163						
Cooper Union				3	17		13										29							62	1	0	1	1	0	42
*Cornell U	5	2		19	48	13	65		4	9				41		7	25			3				241						
Manhattan Coll				10								16												26						7
New York U	7			30	70		122		5					130		8	15	5		11			70	473						
Poly Inst of New York	13		6	10	62		99							6			25	5				50	46	322						
C.W. Post Coll of LIU														86										86	0	0	0	0	0	2
Pratt Inst						38	14										15						2	69						
*Rensselaer Poly Inst	5		5	15	16		99		5		11	18		16		13	33			17				253	2	2	0	2	0	15
Rochester Inst of Tech							15							1			2							18	0	0	1	0	0	1
SUNY Buffalo				11	20		14				7			25			26							103						
SUNY Coll of Ceramics																							3	3	0	0	0	0	0	1

TABLE 25 (Cont.)

ENGINEERING MASTER'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
NEW YORK (CONT.)																														
SUNY Stony Brook						34	52		30		43					6								165						
SUNY Coll Env Sci & Tech																							10	10	0	0	0	1	0	5
Syracuse U	1			2	10		74							33		7	6	1						134	0	0	0	0	0	18
Union Coll					4		13										14						1	32	0	0	0	1	0	0
U of Rochester				11			9									5	10						20	55	0	1				14
NORTH CAROLINA																														
Duke U			4		9		4										6							23	1	0				4
North Carolina A&T St U								1																1	0	0	0	0	0	0
North Carolina St U		4		3	17		15		3					16		4	24			14				100	3	0	0	1	0	32
*U of NC-Chapel Hill												10												10	1	0	0	0	0	2
NORTH DAKOTA																														
North Dakota St U		3			6		9							1			4							23	0	0	0	0	0	10
U of North Dakota				2	4		2										4							12	0	0	0	0	0	3
OHIO																														
Air Force Inst of Tech	59						59			27										5		55		205	0					1
Case Western Reserve U			1	4	7	9	7									9	3	15				5		60						
Cleveland St U				17	6		13		6					11			11	2						66	1					
Ohio St U	25	4		12	28	50	47		8					11			35	14		8			9	251	10	1	0	5	0	51
Ohio U				1	4		6							33			2							46						
U of Akron				5	5		4	1									13							28	0	1	0	0	0	9
U of Cincinnati	34			7	14		15					25				3	25	7		4				134	0	0	0	1	0	41
U of Dayton	1			3	4		5	4						46		4	16							83		2	1			6
U of Toledo				7	2		10				18													37		1				1
Wright St U																						11		11	0	0	0	0	0	2
Youngstown St U					4		1										7	1						13						
OKLAHOMA																														
Oklahoma St U		2		13	14		24	14				14		23			30							134	1	1	1	1	0	50
U of Oklahoma St U	2			6	17		8			2	10		1	4			5	2			8			65	4	0	1	0	0	24
U of Tulsa				4			2				6		5				9				9			35						16
OREGON																														
Oregon St U		1		5	24		17							2			13			2				64	1	0	0	1	0	7
U of Portland							2										7							9				3		
PENNSYLVANIA																														
Bucknell U				3			6										4							13	0	1	0	0	0	5
Carnegie Mellon U			4	9	15		18	7									19	9		17				98	2	0	0	4	0	15
Drexel U			10	6	21		33		2			14		15		8	22							131	4					
Gannon Coll											4													4	0	0	0	0	0	3
Lehigh U				17	12		10		5					24			15	23						106	0	0	0	10	0	10
Pennsylvania St U	17	8		5	22		16	6	4	1	83	16		16			16	3	3	12	4		12	244	1	1	3	3	10	64
U of Pennsylvania			3	18	18	35	32										13	6				26		151	7	2				29
U of Pittsburgh				12	31		38							15			16	6			2			120	3	0	0	0	0	33
Villanova U				4	23		18										9						2	56						26
Widener Coll									5													7		12	1	0	0	0	0	2
RHODE ISLAND																														
Brown U	8						6									4	4						1	23	0	0	0	0	0	9
U of Rhode Island				6	12		5							3	8		4							38	0					14
SOUTH CAROLINA																														
Clemson U		3	8	3	4		7	6	1			18				2	6					2	2	62	1					5
U of South Carolina				6	15		8										5							34	0	0	0	0	0	11
SOUTH DAKOTA																														
SD Sch of Mines & Tech				7	17		14						15				8	9	5					75	1	0	0	0	1	34
South Dakota St U		6			9		12										3							30	0	0	0	0	0	12
TENNESSEE																														
Memphis St U					10		4										6							20						
Tennessee Tech U				2	7		5		7		5						9					2		37	0	0	0	0	0	21
U of Tennessee-Knoxville	5	2		14	10		22		5		4	8		28			11	4		4				117	5					
Vanderbilt U				3	3		2					17		6		2	9							42	3	1				4
TEXAS																														
Lamar U								27			9													36						13
*Rice U				4	4		5					2				1	1							17	1	0	0	0	0	6
St. Mary's U														2										2	0	0	0	0	0	0
Southern Methodist U					3	17	53	3						32			10					23	1	142	2		1	1		15
Texas A&I U				7			22	19													8			56	1	0	2	0	0	18
Texas A&M U	9	8		12	29	58	12							93			18			12	8			259	4					
Texas Tech U		3		3	13		15	12						16			7							69	0	0	1	0	0	18
U of Houston				6	12		15							14			6							53	0					
U of Texas-Arlington					12		10		3					6		1	9							41						15
U of Texas-Austin	22			14	22		38		4			25		8			21				14		8	176	9	0				
U Texas-El Paso							12										6	2						28	1		0			8
UTAH																														
Brigham Young U				7	27		14										25							73	0	0	0	0	0	27
Univ of Utah				8	15	7	11							37		5	9	4			3			99	1					2
Utah St U		8			26		7							11			7							59	1	0	1	0	0	27
VERMONT																														
U of Vermont					12		2										3							17	0	0				0
VIRGINIA																														
#Inst of Textile Tech																							8	8	0	0	0	0	0	0
Old Dominion U					2		6		3								1							12	2	0	0	0	0	2
U of Virginia	4			3	10	8	16		3	7	6					7	2			11				77	6	0	0	0	0	13
Va. Poly Inst & St U	8	5		6	19		26		10			23		11			16	1	2	12			3	142						

TABLE 25 (Cont.)

ENGINEERING MASTER'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
WASHINGTON (CONT.)																														
U of Washington	19			8	73		36										33	3		15			4	191	0	1	1	6	0	50
Washington St U		1		1	6		12					19				4	10			1				54						
WEST VIRGINIA																														
West Virginia U	1	3		19	27		19	28	2					7			5		1		6			118						
WISCONSIN																														
#Inst of Paper Chem.				4																				4	0	0	0	0	0	1
Marquette U			7		3		10									4	9							33	1	0	0	0	0	9
U of Wisconsin-Madison		5		17	27		21	2	7			18		14		10	35	7	2	13				178	5	1	0	0	0	37
U of Wisconsin-Milwaukee					4	4	11		5		5	2					3	6						40						
WYOMING																														
U of Wyoming		2	4	1	7		4					7					9				1			35	3	0	0	0	0	7
PUERTO RICO																														
U of Puerto Rico					2		4										1			6				13						6
TOTAL U.S.	572	152	123	986	2697	589	4003	417	243	107	401	511	52	1831	165	183	2107	313	45	387	93	430	311	16718	202	81	93	214	152	479

#ECPD accreditation at master's level only

TABLE 26

ENGINEERING ENGINEER DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
ALASKA																														
U of Alaska							1																	1	0					
CALIFORNIA																														
Cal Inst of Tech	8																							8	0	0		0	0	1
Stanford U	2			1	10		7		2					2		1	3				2			30	1	0	0	1	0	12
U.S. Naval Postgrad Sch	17						8										6							31	0	0	0	0	0	2
U of Cal-Berkeley							4																	4						
U of Santa Clara																	1							1	0	0	0	0	0	0
U of Southern California	1				4		11									1	8							25						
FLORIDA																														
U of Florida					1						2									1				4	0	0	0	1	0	1
ILLINOIS																														
Midwest Coll of Engr							2																	2						
MASSACHUSETTS																														
Harvard U											1													1	0	0	0	0	0	0
M.I.T.	1			12	13		40								30		20	1		5				122	4	2	1	4	0	63
Northeastern U							3										3							6						0
MICHIGAN																														
U of Michigan-Ann Arbor	1						1							1	1					1				5						
MONTANA																														
Montana Coll of Mineral Sci													1					2	2					5	0	0	0	0	0	0
NEW HAMPSHIRE																														
Dartmouth Coll								1																1	0	0	0	0	0	0
NEW YORK																														
Columbia U					2		12							5			3	2	1	1				26						
New York U	3			3	9		13							3				2		2				35						
Poly Inst of New York	3				2																			5						
Syracuse U							1																	1	0	0	0	0	0	0
NORTH CAROLINA																														
North Carolina St U					4		2									2	1			5				14	0	0	0	0	0	2
OHIO																														
Ohio State U																							14	14						8
OKLAHOMA																														
Oklahoma St U					1																			1						
OREGON																														
Oregon St U																	1							1	0	0	0	0	0	0
TEXAS																														
Rice U				15	4		28					3					12							62	1	0	1	2	0	0
Southern Methodist U							6																	6						2
U of Houston				2	8		8							1			1							20	0					
UTAH																														
U of Utah																		1						1						
Utah State U					1																			1	0	0	0	0	0	1
WYOMING																														
U of Wyoming							1																	1	0	0	0	0	0	0
TOTAL U.S.	36	0	0	33	59	0	148	1	2	0	3	3	1	12	31	4	59	8	3	15	2	0	14	434	6	2	2	8	0	72

TABLE 27

ENGINEERING DOCTOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																													
Auburn U		2					7										3							12						3
U of Alabama-Huntsville									1															1						
U of Alabama-Univereity				2	2		1		2								1							8	0	0	0	0	0	1
ALASKA																														
U of Alaska					1																			1	0					
ARIZONA																														
Arizona St U								17																17						
U of Arizona	3				3		4											2	1	2				15	1	0	0	1	0	1
CALIFORNIA																														
Cal Inst of Tech	7			4	2		7		2	2	7	1				1	4							37	1	0		4	0	13
Stanford U	21			7	10		44		7					11		21	9				3	9		142	2	0	0	1	0	46
US Naval Postgrad Sch	1																							1	0	0	0	0	0	0
U of Cal Berkeley				22	36		37							3	7	15	35			6				161	2	0	0	1	0	5
U of Cal Davis		6			11		5				9						1							34	0	0	0	1	0	9
U of Cal Irvine					1		9																	10				2		1
U of Cal Los Angeles						11	6				8					5	14					32		76						
U of Cal San Diego	1		3						4	3														11	0	0	0	0	0	5
U of Cal Santa Barbara				2			7										2							11				1		9
U of Santa Clara							1																	1	0	1	0	0	0	0
U of Southern California	5		3	6	1	5	24	3								1	2							50						
COLORADO																														
Colorado Sch of Mines													2						3				10	15						5
Colorado St U		5			22		3					5					8							43	0	0	0	0	0	23
U of Colorado	6			4	3		10										1							24	0	0	0	0	0	6
U of Denver							2																	2	0	0	0	0	0	1
CONNECTICUT																														
U of Connecticut				2	4		6										4	3						19						8
Yale U											15													15	1					7
DELAWARE																														
U of Delaware				8	2		2										3							15	0					
DISTRICT OF COLUMBIA																														
Catholic U	4				1		3								2	2	6			1			5	24	0	0	1	1	0	4
George Washington U						1	3										1					2	1	8	0		0			2
FLORIDA																														
U of Florida	1			6	4		7				2	4		4			3	9		3				43	1	0	2	11	0	13
GEORGIA																														
Georgia Inst of Tech	6			3	4		9				2			9			1			7				43	0	0	2	3	0	10
IDAHO																														
U of Idaho		1		1			2											1						5	0	0	0	0	0	0
ILLINOIS																														
Illinois Inst of Tech				4	3		8							2			10	3				1		31	1					
Northwestern U				7	16	3	6				4	3		11		16	2			3			2	73	4	1		1		29
U of Ill-Chicago Circle											8													8	0					
U of Illinois Urbana	4	2		5	28	10	27		8	42		1					8	6	1	3			3	148	2	1				
INDIANA																														
Purdue U	13	6		10	21		17							6			15	7		3				98	2	1	0	1	0	18
U of Notre Dame	3			7	4		1					1					7	2						25	1	0	0	0	0	8
IOWA																														
Iowa St U	3	7	2	10	7		6		3					1			1	7		4			1	52	0					
U of Iowa				3	2		4		4								4							17				1		8
KANSAS																														
Kansas St U				4			2				1			1			5			6				19	0	0	0	0	0	15
U of Kansas				5			7	2	2			1												17	0	0	0	7	1	9
KENTUCKY																														
U of Kentucky					4		1		3								4	3						15						
LOUISIANA																														
Louisiana St U Baton Rouge				6			3				1						3							13						
Louisiana Tech U				1																				1	0	0				
Tulane U				2	2												2							6	0	0	0	0	0	0
MAINE																														
U of Maine				3	1																			4						1
MARYLAND																														
Johns Hopkins U			4				14		12			9		4										43	1					19
U of Maryland				7	4		13										5							29						
MASSACHUSETTS																														
Harvard U											31													31	4	1	0	0	0	8
M.I.T.	13			19	24		45								5		16	29		15				166	0	1	1	3	0	43
Northeastern U				1			6																	7						2
Tufts U							1																	1						
U of Massachusetts				5	4		2										4							15	0	1	1	0	0	2
Worcester Poly Inst				4			5																	9						5
MICHIGAN																														
Michigan St U		9		3	3	2	6		3							1	1					1		29	0	0				9
Michigan Tech U																		1						1						
U of Detroit								4																4	0	0				0
U of Michigan Ann Arbor	8		5	10	6	6	16		2	1		2		9	1	3	16			9			2	96						
Wayne St U				2													2							4	0	0				2
MINNESOTA																														
U of Minnesota	5			8	1	3	14										6	1						40	0	0	0	0	0	3

TABLE 27 (Cont.)

ENGINEERING DOCTOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
MISSISSIPPI																													
Mississippi St U							5	2																7					1
U of Mississippi											2													2	0	0	0	1	0	0
MISSOURI																													
U of Missouri Columbia		4		6			5							1			1			4				21	0	0	0	0	0	9
U of Missouri Rolla				4	2		14						1				9	3	2	1	3			39						
Washington U				7	1	4	10		1			5				2	2					3		35	0	1	0	0	0	17
MONTANA																													
Montana St U				3	2		1																	6						2
NEBRASKA																													
U of Nebraska				1			2		1								2							6	0					2
NEVADA																													
U of Nevada							1																	1						
NEW HAMPSHIRE																													
Dartmouth Coll								5																5	0	0	0	0	0	2
U of New Hampshire								1																1	0					0
NEW JERSEY																													
Newark Coll of Engr				3	1		2										1							7	0					3
Princeton U	11			13	3		8																	35	0	0	0	0	0	14
Rutgers U				2			3		1			2	1				5						7	21	0	0	0	0	0	3
Stevens Inst of Tech							10										4	4						18	0	1	0	0	0	5
NEW MEXICO																													
New Mexico St U					2		6										1							9						
U of New Mexico				1	3		7										3			1				15	0	0	0	0	0	5
NEW YORK																													
City Coll of CUNY				3	1		2																	6	0	0	0	0	0	0
Clarkson Coll of Tech				7							4													11	0					8
Columbia U				3	5		13							3			3	2	2	1				32						
Cooper Union							1																	1						
Cornell U	4	3		1	17	9	12		6	16				5		7	2			2				84						
New York U	6			11	3		14							23				2		2			10	71						
Poly Inst of New York	4		1	3			18															11	1	38						
Rensselaer Poly Inst	2		2	3	2		15		4		2	2				10	5							47	1	0	0	0	0	9
SUNY Buffalo	1			4	4		2				9			2			3							25						
SUNY Coll of Ceramics																							5	5						
SUNY Stony Brook						1	7				3					6								17						
SUNY Coll Env Sci & Forest																							6	6	0	0	0	0	0	2
Syracuse U				3	2		12									2	2							21	0	0	0	0	0	6
Union Coll																							3	3	0	0	0	0	0	0
U of Rochester				8			6									2	9						3	28	1	0				15
NORTH CAROLINA																														
Duke U			1				3										2							6	0	0				1
North Carolina St U		3		3	4		14		9					2		5	10			1				50	3	0	0	0	0	26
U of N C Chapel Hill												3												3	0	0	0	0	0	0
OHIO																														
Air Force Inst of Tech	3																							3	0					0
Case Western Reserve U			6	4	8	2	8									4	5	7				5		49						
Ohio St U	6	3		8	8	8	20		3					5			3	11		5			1	81	2	0	0	2	0	29
Ohio U							4																	4						
U of Akron				1			1										1							3	0	0	0	0	0	1
U of Cincinnati	5			5	1							1				1	6	3		5				27	1	0	0	0	0	6
U of Toledo											8													8						3
OKLAHOMA																														
Oklahoma St U		2		2	7		6	2						6			7							32	0	0	0	1	0	9
U of Oklahoma	1			8						3				6			2	2		1	1			24	0	0	0	0	0	0
U of Tulsa				1									2											3						1
OREGON																														
Oregon St U				2	4		3							1			5	1						16	0	0	0	1	0	2
PENNSYLVANIA																														
Carnegie Mellon U			2	8	3		13										14	2		8				50	0	0	0	2	0	21
Drexel U			3	4			6		1			4				5								23	0					
Lehigh U				4	14		1		7					1				8						35	0	0	0	2	0	5
Pennsylvania St U	2	2		4	5		8		2	1				4			2	2	1	3	2		1	39	0	0	1	0	0	8
U of Pennsylvania			3	3	2	12	12										12	10				4		58	2	1				20
U of Pittsburgh				4	4		4							4			3	1						20	1	0	0	0	0	9
RHODE ISLAND																														
Brown U	5						4									1	6							16	0	0	0	0	0	10
U of Rhode Island				1			4								3		6							14	0					3
SOUTH CAROLINA																														
Clemson U		1		2			7		1			4					1							16						3
U of South Carolina				1			1																	2	0	0	0	0	0	0
SOUTH DAKOTA																														
SD Sch of Mines & Tech							3						3											6	0	0	0	0	0	3
South Dakota St U		2			3																			5	0	0	0	0	0	2
TENNESSEE																														
U of Tennessee Knoxville	5	3		3			6		3		1							1		2				24		1				
Vanderbilt U					1		3		1			2				1	2							10						2
TEXAS																														
Rice U				10	3		12									3	1							29	0	0	0	0	0	11
Southern Methodist U			1			3	17				1						1					5		28	1	1	1			4

TABLE 27 (Cont.)

ENGINEERING DOCTOR'S DEGREE	AEROSPACE	AGRICULTURAL	BIOMEDICAL	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING, GENERAL	ENGINEERING MECHANICS	ENGINEERING PHYSICS	ENGINEERING SCIENCE	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL	MARINE	MATERIALS	MECHANICAL	METALLURGICAL	MINING	NUCLEAR	PETROLEUM	SYSTEMS	ALL OTHER ENGINEERING	TOTAL ENGINEERING	WOMEN	NEGROES	SPANISH SURNAMES	ASIATIC	AMERICAN INDIANS	FOREIGN NATIONALS
TEXAS (CONT.)																														
Texas A&M U	1	3		5	14	6	5						9	8			6			2				59						
Texas Tech U				2	3		5	1						5										16	0	0	0	0	0	3
U of Houston				1	1		4							4			3							13	0					
U of Texas Arlington					3		2							1										6						2
U of Texas Austin	8			6	14		21		4								15				7			75						
UTAH																														
Brigham Young U				3													4							7	0	0	0	0	0	2
U of Utah				4	1	9	5									2	4	4	1					30						1
Utah St U		3			8		2										1							14	1	0	0	1	0	3
VERMONT																														
U of Vermont							2										1							3	0	0				1
VIRGINIA																														
U of Virginia	3		5	1	1	1	3		2	6	2					2				4				30	2	0	0	0	0	10
Va. Poly Inst & St U	3			1	2		6		7			1		4		2	3			1				30						
WASHINGTON																														
U of Washington	4			5	17		11										7	1		2			4	52	0	0	0	0	0	17
Washington St U											4													4						
WEST VIRGINIA																														
West Virginia St U	3			2	4		1		1															11						
WISCONSIN																														
Inst of Paper Chem				1																				1	0	0	0	0	0	0
Marquette U			4				2									5								11	0	0	0	0	0	2
U of Wisconsin Madison		1		17	8		14		2					1			13	5	2	6				69	1	0	0	0	0	10
WYOMING																														
U of Wyoming			1		2																			3	0	0	1	0	0	0
TOTAL U.S.	181	68	46	405	432	96	820	37	109	74	124	51	18	147	18	125	411	143	13	115	17	72	65	3587	39	12	11	54	1708	

3587

OTHER CURRICULA

The following are included under the heading of "All Other Engineering" in the main data tables:

Architectural (*indicates Architecture)	B	M	D
Calif. St. Poly. San Luis Ob.	24	-	-
Heald Engrg. Coll. *	8	-	-
Stanford U.	8	-	-
U. of Colorado	22	-	-
U. of Miami	5	-	-
Chicago Tech. Coll.	28	-	-
Iowa St. U.	95	9	-
U. of Kansas	4	-	-
N. Car. A&T St. U.	5	-	-
Oklahoma St. U.	4	-	-
Pennsylvania St. U.	25	8	-
Tennessee St. U.	5	-	-
Prairie View A&M U.	6	-	-
U. of Texas Austin	36	8	-
Washington St. U. *	144	-	-
Total	419	25	0

Ceramic	B	M	D
Georgia Inst. of Tech.	8	5	-
U. of Illinois Urbana	16	5	3
Iowa St. U.	8	3	1
U. of Missouri Rolla	11	5	-
Rutgers U.	17	2	7
New Mex. Inst. of Mining	1	-	-
SUNY Coll. of Ceramics	60	3	5
Ohio St. U.	9	3	1
Pennsylvania St. U.	16	4	1
Clemson U.	15	2	-
Virginia Poly. Inst.	6	3	-
U. of Washington	16	4	4
Total	191	39	22

Transportation	B	M	D
Calif. St. Poly. San Luis Ob.	7	-	-
Northwestern U.	-	11	2
Poly. Inst. of N.Y.	-	46	-
Total	7	57	3

Textile	B	M	D
Auburn U.	1	-	-
Georgia Inst. of Tech.	2	4	-
Lowell Tech. Inst.	3	4	-
Phila. Coll. of Textiles	19	-	-
Inst. of Textile Tech	-	8	-
Total	25	16	0

Welding	B	M	D
Millikin U.	4	-	-
Ohio St. U.	19	6	-
LeTourneau Coll.	7	-	-
Total	30	6	0

Miscellaneous		B	M	D
U. of Alaska	Arctic Engrg.	-	1	-
Rensselaer Poly. of Conn.	Automatic Control	-	1	-
Catholic U.	Acoustics	-	2	5
George Washington U.	Measurement Sci.	-	-	1
Illinois Inst. of Tech	Fire Protection	9	-	-
Illinois Inst. of Tech	Engrg Graphics	1	1	-
U. of Maryland	Fire Protection	4	-	-
Lowell Tech. Inst.	Paper Engrg.	2	-	-
U. of Michigan	Meteorology	33	17	2
Washington U.	Tech & Human Affairs	-	1	-
SUNY Coll. of Env. Sci.	Forest Engrg.	28	1	1
SUNY Coll. of Env. Sci.	Paper Sci. & Engrg.	19	5	2
SUNY Coll. of Env. Sci.	Wood Products Engrg.	30	4	3
U. of Rochester	Optics	4	20	3
N.C. St. U.	Furniture Mfg & Mgt.	27	-	-
Brown U.	Urban	9	1	-
Southern Methodist U.	Societal & Public Sys.	-	1	-
All Others	Not specified	128	127*	-
Total		294	182	40

*Includes 14 Engineer degrees

TECHNOLOGY DEGREES, 1972-73

The totals for this year include 515 institutions, for which the data have been broken down for the first time in the survey series into engineering technology and industrial technology categories. The distinction was generally made by the school itself, as EMC is unable to undertake the detailed evaluation necessary to make a definitive categorization. For this reason the classification of schools will not be in complete agreement with information compiled by other authorities.

Table 28 gives the results of the survey for all reporting schools combined, by curriculum and degree level. The EMC survey does not attempt to make a 100% follow-up on technology schools except for those on the current ECPD list. Therefore, these data should not be construed to represent U.S. totals.

Because of the difficulty in properly classifying technology curricula under present conditions, ECPD accreditation provides the most satisfactory guideline. Table 29 gives the figures for all ECPD schools combined from 1954 to date, while Table 30 shows the data for schools with curricula accredited or granted early recognition by ECPD as of the 1972 list. The control/accreditation column should be checked to determine whether accreditation applies to the associate degree, bachelor's degree, or both levels. Note that Table 30 will not add up to the same totals as those for 1973 in Table 29, since Table 30 includes all degrees at all levels for all 90 schools listed by ECPD, whereas the Table 29 associate degree totals are for the 83 schools with ECPD accreditation or early recognition at the associate level and the bachelor's degree figures are for the 23 schools with ECPD accreditation at the bachelor's level. Because of the complexity of determining which programs are or are not accredited, and which should be counted

Table 28

TECHNOLOGY DEGREES BY CURRICULUM AND LEVEL, 1972-73

	Engineering Technology			Industrial Technology			
Curriculum	Assoc.	Bach.	Post-Bach.	Cert.	Assoc.	Bach.	Post-Bach.
Aircraft	417	107	0	316	191	116	0
Air Conditioning	320	10	0	391	228	4	0
Architectural	939	73	0	192	251	6	0
Automotive	419	24	0	1069	1028	145	0
Chemical	279	5	0	14	77	0	0
Civil	2073	560	1	195	253	91	0
Computer	937	66	0	200	708	48	0
Drafting, Design	1113	112	0	449	801	70	4
Electrical	1996	906	0	287	352	13	0
Electronic	4378	860	5	911	1229	148	1
General	227	267	11	-	-	-	-
Industrial	356	249	4	117	345	1240	10
Manufacturing	143	143	0	111	81	40	0
Marine	68	11	0	48	141	0	0
Materials, Metals	84	15	0	83	58	16	0
Mechanical	2269	855	0	154	261	15	2
Mineral	34	6	0	0	8	0	0
Nuclear	68	14	0	2	10	0	0
Other	443	119	0	465	459	124	22
2-year Engineering	1753	-	-	-	-	-	-
Total	18316	4402	21	5004	6481	2076	39
Women	436	42	0	96	278	28	1
U.S. Negro	583	151	1	263	165	85	2
Spanish Surnamed	486	41	0	69	76	6	1
Asiatic	74	52	0	15	18	2	0
American Indian	76	3	0	118	9	6	0
Foreign Nationals	210	104	4	23	43	26	5

Note: These statistics are for those schools which responded to the EMC degree survey. Although we attempt to reach all schools known or believed to have technology curricula, not all respond. Therefore the totals given above should not be construed to represent all technology degrees for the entire U.S., nor can they be compared with the survey figures for previous years.

With regard to women, minority groups, and foreign nationals, the above figures include only numbers actually reported. Many schools are unable or unwilling to report data in some or all of these categories. The totals would be substantially higher if all institutions had reported data for all special groups.

Table 29

TECHNOLOGY DEGREES REPORTED BY INSTITUTIONS HAVING AT LEAST ONE CURRICULUM ACCREDITED BY ECPD

1954-1973[1]

Year Ended June 30	Associate Degree Programs[2,3]		Bachelor's Degree Programs[3]	
	Number of Schools	Graduates	Number of Schools	Graduates
1973	84	9,386	24	2,161
1972	68	9,084	15	1,736
1971	63	8,443	11	1,144
1970	52	7,740	5	720
1969	46	6,536	2	173
1968	44	6,264	1	30
1967	38	6,144	NO SURVEY	
1966	37	5,270		
1965	33	5,695		
1964	32	5,507		
1963	32	5,489		
1962	32	6,035		
1961	33	6,284		
1960	34	7,639		
1959	35	6,478		
1958	35	5,928		
1957	NO SURVEY			
1956	29	5,499		
1955	27	4,365		
1954	27	3,927		

1 Data for 1954-65 were gathered by Donald C. Metz and others for ASEE. Data for 1966 to date were provided by EMC.

2 Includes ECPD-accredited programs leading to certificates.

3 To be consistent with earlier years, 1973 totals include both engineering technology and industrial technology graduates of the ECPD schools.

TABLE 30

TECHNOLOGY DEGREES
ECPD SCHOOLS ONLY
1972-73

SCHOOL	CONTROL & ACCRED	ENGINEERING TECHNOLOGY ASSOC.	2-YR ENGRG	BACH.	POST-BACH.	INDUSTRIAL TECHNOLOGY CERTIF.	ASSOC.	BACH.
DeVRY INST of TECH, PHOENIX	PAB	157		60				
PHOENIX COLL, ARIZ.	LA	33	20			8		
CALIF. ST POLY COLL SAN LUIS OBISPO	SB			104				76
CITY COLL of SAN FRANCISCO	LA	49	80				31	
COGSWELL POLY COLL, CALIF.	LA	25		4				
GROSSMONT COLL, CALIF.	LA	61						
NORTHROP INST of TECH, CALIF.	IA	21		69				
COLORADO ELECTRONIC TECH COLL	PA	16						
SOUTHERN COLORADO ST COLL	SAB	36		26			30	20
HARTFORD ST TECH COLL	SA	138						
NORWALK ST TECH COLL	SA	189						
THAMES VALLEY ST TECH COLL	SA	115						
WATERBURY ST TECH COLL	SA	142						
EMBRY-RIDDLE AERO. U, FLA.	IAB	2		7				
FLORIDA A&M U	SAB			17				
ST. PETERSBURG JR COLL	LA	23	75					
SOUTHERN TECH INST, GA.	SA	230		287				
RICKS COLL, IDAHO	RA	28						
BRADLEY U, ILL.	IB	7		110				
INST of DRAFTING & TECH, ILL.	PA	74	(E)					
INDIANA U-PURDUE U	SAB	83		60			84	44
PURDUE U (3 CAMPUSES)	SAB	418		193			182	136
IOWA ST U	SA	106						
KANSAS TECH INST	SA	46				8	2	
WESTERN KENTUCKY U	SAB	1		28				29
CAPITOL INST of TECH, MD.	IAB			68				
FRANKLIN INST of BOSTON	LA	81				65		
LOWELL TECH INST, MASS	SAB	93		53				
NORTHEASTERN U, LINCOLN COLL, MASS.	IB	138		57				
SOUTHEASTERN MASS. U	SB			49				
WENTWORTH INST	IA	519				63		
LAKE SUPERIOR ST COLL, MICH.	SA	33	11	27				
MICHIGAN TECH U	SA	88						
ROCHESTER COMM COLL, MINN.	SA	21	11					
FLORISSANT VALLEY COMM COLL, MO.	LA	76	29				6	
MISSOURI INST of TECH	PA	70		30				
U of NEBRASKA, OMAHA	SA	43		19				5
U of NEVADA, RENO	SA	13						
NEW H'MPSHIRE TECH INST	SA	49						
MIDDLESEX COUNTY COLL, N.J.	LA	62	8			6		
EASTERN NEW MEXICO U	SA	9						
NEW MEXICO ST U	SA	36	19					
ACADEMY OF AERONAUTICS, N.Y.	IA	252						
BRONX COMM COLL, N.Y.	SA	35	29					
BROOME COMM COLL, N.Y.	SA	87	20				25	
ERIE COMM COLL, N.Y.	SA	333	20					
HUDSON VALLEY COMM COLL, N.Y.	SA	179	11				10	
MOHAWK VALLEY COMM COLL, N.Y.	SA	144	20					
QUEENSBOROUGH COMM COLL, N.Y.	SA	146						
RCA INSTITUTES, N.Y.	PA	175						
SUNY A&T COLL, ALFRED	SA	188	10				51	
SUNY A&T COLL, CANTON	SA	126	14					
SUNY A&T COLL, FARMINGDALE	SA	228	57					
FAYETTEVILLE TECH INST, N.C.	SA	40						
FORSYTH TECH INST, N.C.	SA	36						
GASTON COLL, N.C.	SA	67						
W.W. HOLDING TECH INST, N.C.	SA	73						
TECH INST of ALAMANCE, N.C.	SA	29					10	
FRANKLIN U TECH INST, OHIO	IA	25		24				
OHIO COLL of APPLIED SCIENCE	SA	119						
OHIO INST of TECH	PA	116		41				
SINCLAIR COMM COLL, OHIO	LA	48					13	
U of AKRON TECH COLL, OHIO	SA	113		59			19	
U of DAYTON, OHIO	RAB	64		103				
YOUNGSTOWN ST U, OHIO	SA	95						
OKLAHOMA ST U, STILLWATER	SA	145		133				
BLUE MOUNTAIN COMM COLL, ORE.	SA	19						
OREGON INST of TECH	SAB	174		129			180	67
OREGON ST U	SB			85				
PENNSYLVANIA ST U (ALL CAMPUSES)	SA	734		177				
SPRING GARDEN COLL, PA.	IA	77		123				
TEMPLE U, PA.	SA	117		68				
MIDLANDS TECH ED CTR, S.C.	SA	78				7		
SUMTER AREA TECH ED CTR, S.C.	SA	19						
CHATTANOOGA ST TECH INST, TENN.	SA	41					54	
MEMPHIS ST U, TENN.	SB			68	11			
NASHVILLE ST TECH INST, TENN.	SA	30						
ST TECH INST AT MEMPHIS, TENN.	SA	75				34		
DEL MAR COLL, TEX.	LA	21	11				11	
DeVRY INST of TECH, DALLAS	PA	18		5		50		
U of HOUSTON	SB	8		165				
U of TEXAS, ARLINGTON	SA	Program		Discontinued				
BRIGHAM YOUNG U, UTAH	RAB	8		75			5	13
WEBER ST COLL, UTAH	SAB	30		62				
VERMONT TECH COLL	SA	132						
OLD DOMINION U, VA.	SA	30		24				
BLUEFIELD ST COLL, W. VA.	SA	65	3	11				
MILWAUKEE SCH of ENGRG, WIS.	IAB	162		69				
DeVRY INST of TECH, CHICAGO	PAB	346		188				

LETTERS AFTER NAME OF SCHOOL INDICATE CONTROL & ENGINEERING TECHNOLOGY ACCREDITATION

CONTROL: S = STATE
L = LOCAL GOVERNMENT
I = INDEPENDENT NONPROFIT
R = RELIGIOUS
P = PRIVATE, OTHER

ACCREDITATION, ECPD (ONE OR MORE CURRICULUM)
A = ASSOCIATE LEVEL
B = BACHELOR'S LEVEL

as engineering technology or industrial technology, it is practically impossible to draw exact conclusions from the technology statistics from one year to another. One obvious conclusion, however, is that the number of schools is growing faster than the number of graduates being produced. Although 15 more schools were granted ECPD accreditation at the associate degree level and 8 at the bachelor's degree level, the average number of degrees per school dropped substantially. This trend is especially pronounced in the 2-year schools, where the average has been decreasing since 1956.

ECPD schools included this year that were not in last year's degree report are Colorado Electronic Technical College, Southern Colorado State College, Florida A&M U., Bradley U., Purdue Campuses at Calumet and Fort Wayne, Kansas Technical Institute, Western Kentucky U., Southeastern Massachusetts U., U. of Nebraska, Holding Tech. Inst., Franklin U., Youngstown St. U., Sumter Area Tech. Ed. Center, Nashville St. Tech. Inst., DeVry Inst. of Tech. in Dallas, and Bluefield St. College.

Note that all of the Pennsylvania State U. commonwealth campuses are counted as one school in the ECPD list and in the degree tables. The Purdue campuses are listed separately by ECPD but are combined in the tables of this report. The U. of Texas at Arlington and Iowa State U. have terminated their technical institute divisions, the RCA Institutes program is in the process of being discontinued, and the Institute of Drafting and Technology in Illinois has closed.

Among the various technology curricula, electronics continues to have the most graduates at the associate degree level. Industrial technology is the curriculum with the most bachelor's degree graduates, while electrical, mechanical, and electronic technologies are the leaders in the bachelor of engineering technology group.

The number of degrees earned by women and minority members seems to be increasing markedly, but as explained in connection with the engineering degrees, reports from many schools are incomplete and reliable comparisons cannot be made from year to year without making adjustments for the variations in reporting.

Detailed breakdowns by school and curriculum are given for engineering technology in Tables 31-33 (associate, bachelor's, and post-baccalaureate levels) and for industrial technology in Tables 34-37 (certificate, associate, bachelor's, and post-baccalaureate levels.) Additional information about programs listed under "OTHER" in the main tables will be found after Table 37.

TABLE 31

ENGINEERING TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																											
Alexander City Jr Coll			1		5	5			6							5			8		30	0	2	0	0	0	0
J C Calhoun St Tech Jr Col							5			7						3				4	19	0	3	0	0	0	0
Jefferson St Jr Coll							16				6									11	33	8	4				4
ARIZONA																											
#DeVry Inst of Tech										157											157	0	3	5	4	0	2
Eastern Arizona Coll								11		5									4	2	22	0	0	5	0	4	1
Glendale Community Coll																			10		10	0	0	1	0	0	1
Maricopa Tech Coll				9			8	9		9											35	3	0	6	1	1	0
Mesa Community Coll								6		3	41					4					54						
#Phoenix Coll						8		8		17										20	53	2	4	8	0	2	0
ARKANSAS																											
Hendrix Coll																				5	5	1	0	0	0	0	0
Southwest Tech Inst	12				1	2	9	6		32						10					72	4	3				
CALIFORNIA																											
Allan Hancock Coll			1				1				3										5	0					
American River Coll											68									22	90	13					0
Bakersfield Coll								15	2												17						
Canada Coll																				4	4						
#City Coll of San Francisco						10		3	1	20						15				80	129						
#Cogswell Poly Coll						5				16						4					25	0	0	3	0	3	3
Contra Costa Comm Coll			10		6						7									20	43	1	4	3	1	0	2
Cosumnes River Coll				10				5													15	3	2				3
Coll of Marin																				16	16						
Coll of the Desert																				1	1	1					
Coll of the Redwoods											2										2	0	0	0	0	0	0
Diablo Valley Coll			15			5	6	9	1	21	1	15									74	1	1	6	6		1
Electronic Tech Inst										2											2	0					
Grantham Sch of Engr										6											6						
#Grossmont Coll			8			5	1			5									42		61	8		4			
Humphreys Coll										5											5	0	0	0	0	0	0
Los Angeles Pierce Coll							10				12									15	37	0	0	3	1	0	0
#Northrop Inst of Tech	16									5											21	0	0	1	5	0	1
Menlo Coll																				4	4	0	0	0	0	0	1
Riverside City Coll								2											2	4	8	0	0	0	0	0	0
San Diego Mesa Coll	4		12			3				11				3							33						
San Joaquin Delta Coll						6		7											6	12	31	1	0	6	2	0	0
Santa Monica Coll			16					1		19			4							15	55						
Shasta Coll	1						9	5		17	2					11			6	15	66						
Sierra Coll			2	8	1	1		7		11											30	1					
Taft Coll																				1	1						
Ventura Coll						2					8										10						
Victor Valley Comm Coll	2		1	2						4									4		13	0	0	0	0	0	0
Western Sta Coll of Engr										5											5					3	
COLORADO																											
#Col. Electronic Tech Coll										4									12		16	0	0	1	0	1	0
Comm Coll of Denver			7			7				50											64	1					
Fort Lewis Coll																				21	21						
Mesa Coll						4		6													10						
Metropolitan State Coll						4		1		8						8					21	0	1	1	18	0	1
Northeastern Jr Coll						2															2	0	0	0	0	0	0
#Southern Colorado St Coll						10				18					3	5					36						
CONNECTICUT																											
#Hartford St Tech Coll						42	24		37				8			20		7			138	11					
#Norwalk St Tech Coll					18		35		13	47		6	13		5	52					189	12	6	6	1	0	1
#Thames Valley St Tech Coll					18		14		40				26			17					115	11	0	0	0	0	0
S.I. Ward Tech Coll							20			21											41	0	2	1	2	0	0
#Waterbury St Tech Coll					5	2	30		53				24		4	24					142	14	2				
DELAWARE																											
Del. Tech & Comm Coll No Br			2		5			6	4	6		7				13					43	1	1		1		
DISTRICT OF COLUMBIA																											
Washington Tech Inst			7			5		9	13	10						5					49	6	42				26
FLORIDA																											
Brevard Comm Coll		6				1	10	12		30		3		3		4			17		86						
Chipola Jr Coll																				10	10						
Daytona Beach Comm Coll				10		3	13	5		22						3				12	68	5	4	0	0	0	0
#Embry-Riddle Aeronautical U	2																				2	1					
Florida Coll																				1	1	0	0	0	0	0	0
Hillsborough Comm Coll			12							32											44	0	19	5	0	0	0
Lake-Sumter Comm Coll								1	5											5	11		1				
Miami-Dade Comm Coll	13	6	26			12	12	8	4	54			4	11					24	68	242	8					
Okaloosa Walton Jr Coll			3			2	15	10	2	8						2					42	3	6	2	1	1	0
Palm Beach Jr Coll	1	8						9		7										10	35		2	3			
Polk Comm Coll					2	2		4		7											15	2	3	3			1
St Johns River Jr Coll						1				2									1		4	0	0	0	0	0	0
#St Petersburg Jr Coll										19						4				75	98	0	3	0	0	0	0
Talahassee Comm Coll						3															3		1				
Tampa Tech Inst			35			50		15		45											155						
GEORGIA																											
DeKalb Comm Coll																				49	49	9					

TABLE 31 (Cont.)

ENGINEERING TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
GEORGIA (CONT.)																											
Middle Georgia Coll																				22	22	0	0	0	0	0	2
#Southern Tech Inst		2	30			36			63			34				50			15		230	2	1	0	0	0	7
IDAHO																											
Coll of Southern Idaho																				10	10	1					
Lewis-Clark St Coll				6	10			6		8						7					37	2	0	0	0	1	0
Northwest Nazarene Coll																				5	5	0	0	0	0	0	0
#Ricks Coll								18		8			2								28	1					
ILLINOIS																											
Bradley U						5			1							1					7	0	1	0	0	0	0
Chicago Tech Coll			2			1			3							5					11	0	1	0	0	0	1
Coll of DuPage																				25	25						
Coll of Lake County						1				4						5					10	0	1	0	0	0	0
DeVry Inst Tech, Chicago										346											346	0	53	7			35
Eastern Illinois U																				11	11						
Highland Comm Coll																				4	4						
Illinois Eastern Jr Coll		8		14				2		5					11				5		45						
Illinois Valley Comm Coll								9		16						7				5	37						
Industrial Engr Coll												12									12	1	2	0	0	0	1
#Inst Draft & Tech (Note 1)						19		55													74						
Kennedy-King Coll		15	2	21				15				7								11	71	0	69				
Lake Land Coll						16														6	22	0	0	0	0	0	0
Monmouth Coll																				3	3	0	0	0	0	0	0
Morton Coll					2					9										1	12	0	0	0	0	0	0
Olive-Harvey Coll			3		5	1	14			27										3	55	4	34	5	1	0	0
Parkland Coll						7			9							1			6		23						
Parks Coll of St Louis U	38																				38	0	2	0	0	0	5
Prairie St Coll			11					1		7						3				5	27	2	0	0	0	0	0
Spoon River Coll				9		4	5	4													22	3	0	0	0	0	0
Thornton Comm Coll										6						3			13	3	25	0	1				
Triton Coll								3		7											10	0	0	1	0	0	0
William Rainey Harper Coll			12							24						5			5	13	59	0	0	0	0	0	0
INDIANA																											
#Indiana U-Purdue U					1	4		4	42			8				24					83						
#Purdue U (Note 2)			38		4	46			185			46			4	95					414	1	9	3	0	0	0
IOWA																											
Clinton Comm Coll								13		12										5	30	1					
E. Iowa Comm Coll Dist							11			10						9					30	6					
Ellsworth Comm Coll																				5	5	0	0	0	0	0	0
Hawkeye Inst of Tech						6				20						11					37		1				
Indian Hills - Centerville																				3	3	0	0	0	0	0	0
Indian Hills-Iowa Tech	15						34			17											66	0					
#Iowa St U						29				56						21					106	0	0			0	0
Kirkwood Comm Coll										10						10					20	0	0	0	0	0	0
Marshalltown Comm Coll								9		5											14						
Southeastern Comm Coll				13				11		5						2				7	38	0	0	0	0	0	1
KANSAS																											
Dodge City Comm Coll																				10	10	2	0	1	0	0	0
Highland Comm Jr Coll																				31	31	1	0	0	1	0	0
#Kansas Tech Inst						8	9			22						7					46	3					
McPherson Coll																				1	1	0	0	0	0	0	1
KENTUCKY																											
Somerset Comm Coll						5														6	11						
#Western Kentucky U																1					1						
LOUISIANA																											
Centenary Coll of La.																				2	2						1
Sowela Tech Inst										16											16			1			
MAINE																											
So Maine Voc Tech Inst		1		3		5			9	14				18		1			1		52	5	0	0	0	0	0
U of Maine						21			13							14			5		53						
MARYLAND																											
Allegany Comm Coll				3			1													1	5	0	0	0	0	0	0
Anne Arundel Comm Coll			7							3				8		4				4	26	1					
Catonsville Comm Coll			7		3					11										4	25	0	1				
Hagerstown Jr Coll							7			5						5					17	0	0	0	0	0	0
Montgomery Comm Coll			5							9	3					1				15	33	0					
Prince George's Comm Coll						5	21	3		7						1				8	45	5	3	1	1	0	0
MASSACHUSETTS																											
Berkshire Comm Coll										5										8	13	0	0	0	0	0	0
Central New England Coll																				80	80	1	0	0	0	0	9
#Franklin Inst of Boston			15		2	16			12	22						14					81	0	2	2	1	0	18
Greenfield Comm Coll						9	5														14	5	0	0	0	0	0
#Lowell Tech Inst					6	33			2	29		8				13			2		93						
Massasoit Comm Coll									13							7					20	0	0	0	0	0	0
Merrimack Coll										11											11	0	0	0	0	0	0
Northeastern U						12	4		65							57					138	0					0
North Shore Comm Coll									16												16	0	0	0	0	0	0
Northern Essex Comm Coll							21			11										9	41	0	0	1	0	0	2
Quinsigamond Comm Coll						3				3						5			2	6	19						
Springfield Tech Comm Coll																				7	7	0	0	0	0	0	0

TABLE 31 (Cont.)

ENGINEERING TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
MASSACHUSETTS (CONT.)																											
#Wentworth Inst	28		103			124			33	135		4				85		7			519	0	10	2	8	0	14
MICHIGAN																											
Calvin Coll																				10	10						
Delta Coll			9	12						15						17			4	7	64	0	0	0	0	0	0
Ferris St Coll													8								8						
Kalamazoo Coll																				2	2	0	0	0	0	0	0
Lake Michigan Coll																				5	5	0	0	0	0	0	0
#Lake Superior St Coll							9	7		4						13				11	44	1	0	0	0	0	0
Lawrence Inst of Tech					2	9	15			17		18				26					37						
#Michigan Tech U						44			44												88		1				
Montcalm Comm Coll			7	13				6				1								6	33	1					1
Muskegon Comm Coll				5				8		12		20			5	8			20	30	108						
Northwestern Mich. Coll																				8	8	0	0	0	0	0	0
Oakland Comm Coll				15				5		8			3								31	0	0	0	0	0	0
MINNESOTA																											
Austin Comm Coll																				8	8						
Fergus Falls St Jr Coll																				4	4	0	0	0	0	0	0
Hibbing St Jr Coll																				10	10	0	0	0	0	0	0
Mesabi St Jr Coll																				6	6	0	0	0	0	0	0
North Hennepin Comm Coll																				3	3	0	0	0	0	0	0
Northland Comm Coll																				6	6	0	0	0	3	0	0
#Rochester Comm Coll						8				4						9				11	32						
St. Cloud St Coll							4		3							2			2		11						1
Southwest Minn. St Coll								2		3						6				4	15	0	0	0	0	0	0
Vermilion Jr Coll																				6	6						
MISSISSIPPI																											
East Central Jr Coll																				11	11	1					
Holmes Jr Coll						10		9												5	24	1					
Northeast Miss Jr Coll						1		3		3										3	10	1					
MISSOURI																											
Culver-Stockton Coll																				7	7	2					
Forest Park Comm Coll									4	8						6				13	31	0	1	2			
Jefferson Coll			4							7										4	15						
#Florissant Valley Comm Coll						12			10	18		9				27				29	105						
Linn Tech Coll	5			69			10	40		49						15					188	4	2	0	0	0	3
#Missouri Inst of Tech										70											70	0	3	0	0	0	1
Missouri Southern St Coll							11	3							2					13	29	3	1	0	0	0	0
Missouri Western St Coll								4		4											8	0	0	0	0	0	0
Moberly Area Jr Coll																				3	3	1	0	0	0	0	0
Springfield Bd of Ed										6						5					11	0	0	0	0	0	0
NEBRASKA																											
Nebraska Tech Coll						19				14											33	0	0	0	0	0	0
Nebraska Weselyan U																				3	3	0	0	0	0	0	0
Nebraska Western Coll																				17	17	1	0	2	0	0	0
U of Nebraska-Omaha						3		13		20		7									43	0	0	0		0	0
U of Nebr Sch of Tech Agr						7															7	0	0	0	0	0	0
NEVADA																											
#U of Nevada, Reno			6			1				5						1					13	1	1			1	
NEW HAMPSHIRE																											
New England Aero Inst	13										3										16	0	0	0	0	0	0
NH Voc Tech Coll-Ptsmth								15		9											24						
#New Hampshire Tech Inst									7	25						17					49	0	0	0	0	0	0
NEW JERSEY																											
Atlantic Comm Coll										6											6	0	0	0	0	0	0
Burlington County Coll								5		7										4	16	1					
County Coll of Morris										20						16					36						
Mercer County Comm Coll			20			9			18							8				11	66	1	3				
#Middlesex County Coll						12				29						21				8	70	1					
Salem Comm Coll					3			8		13									5		29	1	2				
Union Coll																				7	7			1			
NEW MEXICO																											
#Eastern New Mexico U						2		3		4											9	0	0	1			
New Mexico Jr Coll			1					4		2											7						
#New Mexico St U						10				17						9					36			15			
North Amer Tech Inst										19											19	0	0	2	0	1	0
NEW YORK																											
#Academy of Aeronautics	167							34		42				9							252						
Adelphi U																				2	2	0	0	0	0	0	0
Adirondack Comm Coll																				10	10	0	0	0	0	0	0
Auburn Comm Coll																				6	6	1					
#Bronx Comm Coll									28							7				29	64	2					
#Broome Comm Coll					9	20			34							24				20	107	0	0	0	0	0	0
Colgate U																				1	1						
#Erie Comm Coll-N. Campus					29	111			96			15			17	65				20	353	10	3	2	0	1	1
Fulton-Montgomery Com Coll									9											3	12	0	0	0	0	0	0
#Hudson Valley Comm Coll		11	33	20	8	24			53							16			14	11	190	4	2				
Jamestown Comm Coll																18				17	35	0					
Jefferson Comm Coll																				9	9	1	0	0	0	0	0
Monroe Comm Coll											12								8		20	1	0				0

TABLE 31 (Cont.)

ENGINEERING TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
NEW YORK (CONT.)																											
#Mohawk Valley Comm Coll						58			45							41				20	164	2	2	3	0	0	0
Nassau Comm Coll											26										26						
New York City Coll			9		28	60		41	20	88						35			20		301	3					
#RCA Institutes										175											175	4	60				
Orange County Comm Coll																				9	9						
#Queensborough Comm Coll							18	14		84						30					146	0	15				
Rochester Inst of Tech						3		5					1								9						
#SUNY Agr & Tech Coll-Alfred		26	28	22		60			28							24				10	198	3	2	0	2	3	4
#SUNY Agr & Tech Coll-Canton		20		32		43			17							14				14	140						
SUNY Agr & Tech Col-Delhi			3			89										2			3	18	115	3				1	
#SUNY Agr & Tech Col-Fmgdle	64	24	19	25		11			34							14			37	57	285	5	12	23	2		
Schenectady Co. Comm Coll										4											4	1					
Staten Island Coll																				12	12	1	1	0	1	0	0
Tompkins-Cortland Com Coll			1			4		1								2					8	0	0	0	0	0	0
Ulster Comm Coll										10		1				8				8	27		3				
Yeshiva U																				2	2	0	0	0	0	0	0
NORTH CAROLINA																											
Central Carolina Tech Inst								1	4												5						
Chowan Coll																				3	3	0	0	0	0	0	0
Davidson Co. Comm Coll								3	4												7						
#Fayetteville Tech Inst						11				21									8		40	2	3	0	0	2	1
#Forsyth Tech Inst			8					11		11											36	5	0	1	0	0	0
#Gaston Coll					2	26			5	17		8				9					67	0	1	0	0	0	8
Guilford Tech Inst			6			7		10		13											36	3					
#W.W. Holding Tech Inst			15		6	18	5			20		9									73	0	4	0	0	0	0
Isothermal Comm Coll										3										3	6						
Lenoir Comm Coll							9	15		8											32	6					
Pitt Tech Inst			7							4											11						
Richmond Tech Inst										9						3					12	0	1	0	0	0	0
Sandhills Comm Coll						9														5	14	0	0	0	0	0	0
Southeastern Comm Coll										6											6	0	0	0	0	1	0
Surry Comm Coll								8		8											16		1				
#Tech Inst of Alamance							3	16		10											29	3	0	0	0	0	0
Wayne Comm Coll								5		5		1									11		1				
Western Piedmont Comm Coll												3									3						
Wilson County Tech Inst		3		4				9		6			7								30	0	2	0	0	0	0
Wingate Coll																				21	21	1	0	0	0	0	2
NORTH DAKOTA																											
Bismarck Jr Coll																				26	26	1					
N.D. St Sch of Science		21	18			23			76	50						6				4	198	1					
OHIO																											
Clark Tech Coll						6			16							6					28	0	1	0	0	0	0
Cuyahoga Comm Coll			18							49						24					91	2	13	3	1	0	1
#Franklin U			4					6		12						3					25	0	0	0	0	0	0
Hocking Tech Coll								4		16		7				7			9		43						1
ITT Tech Inst Dayton			96													100					196	0	4	0	0	0	0
ITT Tech Inst Toledo			6							14											20	0	0	0	0	0	0
Lakeland Comm Coll						1				12		4				11					28						
Lorain County Comm Coll						8		13	31			8				3					63			2			
Kent St U-Ashtabula									12			5				8				10	35						
Kent St U-Salem						11			26			3				7					47						
Marietta Coll																				1	1	0	0	0	0	0	0
Miami U													9								9	0	3				
North Central Tech Coll										10		3				18					31						
#Ohio Coll of Applied Sci			13		6	13			17	32						38					119	2	3	0	0	0	4
#Ohio Inst of Tech										116											116						
Michael J Owens Tech Coll					2	5			10							9					26	0					
#Sinclair Comm Coll										18						14			3		35						
Stark Tech Coll								10	34							33					77	1	0	0	0	0	0
#U of Akron Comm & Tech Col					5	6				69						32			1		113	1			1		
#U of Dayton Eng Tech Div					9					21		14				20					64	1	3				1
U of Toledo Com & Tech Col			7		11	10	37	3		24		7				12			3		114	15					
#Youngstown St U						17	37		28						4	9					95	12	1				2
OKLAHOMA																											
Cameron Coll			10							7											17						
NE Okla. A&M Coll		31		37			111	39		55	1					34					308						
Okla. St Tech, Okmulgee		80					13	53	49	89						17					303	5	28	0	0	48	2
#Okla. St U, Stillwater	34					11		9		31					5	20	2	27	7		145	12	4	0	3	0	0
OREGON																											
#Blue Mountain Comm Coll						12				7											19						
Chemeketa Comm Coll						12		7		16						5					40	1					
Clatsop Comm Coll						4															4	0	0	0	0	0	0
Mt Hood Comm Coll			5			14		3													22						
#Oregn. Inst. of Tech						63	27	7		47						30					174	2	0	0	0	1	0
Portland Comm Coll			8			18		4		22						34			3		89						
SW Oregon Comm Coll	2						15	2		2										8	29	7	0	0	0	1	4
Umpqua Comm Coll						12														2	14						
PENNSYLVANIA																											
Albright Coll																				3	3	0	0	0	0	0	0

TABLE 31 (Cont.)

ENGINEERING TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
PENNSYLVANIA (CONT.)																											
Comm Col of Allegheny Cty						7	50	27		16	5					3			2	1	111	11	15				
Comm Col of Beaver Cty				20		5		3		12											43	0	1	0	0	0	0
Comm Coll of Phila			11		1						11	8		3							31						
Electronic Insts								37		93											130	2	2				
King's Coll																				1	1	0	0	0	0	0	0
Lehigh County Comm Coll																				9	9	1	0	0	0	0	0
Lincoln U																				1	1	0	1	0	0	0	0
Luzerne County Comm Coll			15							11						3					29	0	0	0	0	0	0
Lycoming Coll																				1	1	0	0	0	0	0	0
Northampton Cty Com Coll			9				22	5		15											51	3	0	4	0	0	5
#Penn. St U (All Campuses)					27	48	63		303						9	249	20	9	6		734	81					
Pennsylvania Tech Inst										213											213	0	4	0	0	0	2
Pennco Sch of Electronics										14											14	0	2				
Point Park Coll								3		3						5					11						
#Spring Garden Coll						30	9			16			11			11					77	6	7	4			2
#Temple U, Col of Engr Tech						34				30						34			9		117	1	16	0	1	0	0
RHODE ISLAND																											
Rhode Island Jr Coll										10										8	18						
SOUTH CAROLINA																											
#Midlands Tech Ed Ctr			8			20			6	12		7				6		18			78	1	3	0	0	0	0
#Sumter Area Tech Ed Ctr						10													9		19	1	2				
Tri-County Tech Ed Ctr						5		2		9		4									20						
SOUTH DAKOTA																											
Augustana Coll																				3	3	0	0	0	0	0	1
U of SD-Springfield										11											11	0	0	0	0	0	0
TENNESSEE																											
Carson-Newman Coll																				1	1	0	0	0	0	0	0
#Chattanooga St Tech Inst						9			7	12						12			1		41	0	1	0	0	0	0
Columbia St Comm Coll						11	12			6										5	34	8	3				
David Lipscomb Coll																				2	2	0	0	0	0	0	0
#Nashville St Tech Inst					4				2	14		3				7					30	1	3	2	0	0	0
#St Tech Inst at Memphis			13		2	71	5		8	22						11			3		75	1	11	0	0	0	0
Tri-Cities Voc Tech Sch										4						1					5						
TEXAS																											
Brazosport Coll							2	2		4				10	2						20						
Dallas Cty Comm Col Dist			1					15		32										9	57	3	5	3	1	0	0
#Del Mar Coll		5							6	9						1				11	32	1	0	7	0	0	0
#DeVry Inst Tech-Dallas										18											18						
Grayson County Coll																				2	2	0	0	0	0	0	0
Howard County Jr Coll																				6	6						
San Antonio Coll		4						23		18											45	0	0	0	0	0	0
Tarrant County Jr Coll			5					7		25											37						
Temple Jr Coll																				3	3						
#U of Houston						3		2		1			1			1					8	0					
UTAH																											
#Brigham Young U								2		6											8	0	0	0	0	0	0
Inst for Tech Training						2	2			5						2			2		13						
Snow Coll																				8	8	0	0	0	0	0	0
Utah Tech Coll-Provo								14	23	26						2			4		69	2	0	1	0	0	1
Utah Tech Coll-Salt Lake			12					18		33											63	1		1	2		
#Weber St Coll				4				7		19											30						
VERMONT																											
#Vermont Tech Coll			24			56			10	28						14					132	3	0	0	0	0	1
VIRGINIA																											
Blue Ridge Comm Coll								3		7									2		12	2					
Central Va Comm Coll										2						4			3		9	0	0	0	0	0	0
Eastern Shore Comm Coll																			2		2						
Northern Va Comm Coll			12	7		4				33						8			7		71						
#Old Dominion U								9		14						7					30	0	0	0	0	0	0
Tidewater C Col-Frederick										6									5		11	0	0	1	0	0	0
Va Commonwealth U		11				19		35		14									1		80	4					
Va Western Comm Coll			7			10			16							8			2		43		3				
Wytheville Comm Coll						5		5											9	1	20	1					
WASHINGTON																											
Big Bend Comm Coll																				3	3	0	0	0	0	0	3
Centralia Coll						12				8										6	26						
Clark Coll						9				11						3				5	28	0	0	0	0	0	0
Highland Comm Coll						1															20	0	0	0	0	0	1
Olympia Voc Tech Inst						9							4	15							9	0	0	0	0	0	0
Peninsula Coll											1										1	0	0	0	0	0	0
Shoreline Comm Coll						10				31						2				35	78						
Skagit Valley Coll						10				4											14						
Wenatchee Coll																				7	7						
Yakima Valley Coll						10															10	0	0	0	0	0	0
WEST VIRGINIA																											
#Bluefield St Coll			2			12	7		15	12						9	8			3	68	1	3				
Fairmont St Coll										24		10				40			7		81	0	0	0	0	0	0
Parkersburg Comm Coll																8					8						

TABLE 31 (Cont.)

ENGINEERING TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
WEST VIRGINIA (CONT.)																											
Potomac St Coll						1														4	5	0	0	0	0	0	0
West Va. Inst of ech						16		12	51							17					96						
WISCONSIN																											
Acme Inst Tech, Inc (3)								23													23	0	0	0	0	0	0
Blackhawk Tech Inst								4		4											8	0	0	0	0	0	0
Mid-State Tech Inst						14		3	2												19	1	0	0	0	0	0
Milwaukee Area Tech Coll		11	28		6	13			68		15				7	47			8		203	3		2			3
#Milwaukee Sch of Engr		7	36	14	1		27		5	29		20			6	7					167	0	0	1	1	0	5
Moraine Park Tech Inst								8				11									19						
U of Wis Center System																				78	78	2					
U of Wis, Platteville																				26	26						
Western Wis Tech Inst		8		11			22	7		15									21		84						
WYOMING																											
Casper Coll										12							4			12	28	0	0	0	1	0	0
Eastern Wyoming Coll																				1	1						
PUERTO RICO																											
Puerto Rico Tech Inst		12			24	27	20	12	14	34						16			26		183	28	4	149			2
U of PR, Mayaguez						62		24	51							30					167	10		157			
TOTAL U.S.	417	320	939	419	279	2073	937	1131	996	1378	227	356	143	68	842	269	34	68	443	1753	18316	936	883	1486	74	76	210

NOTES:
These schools are on list of schools having at least one curriculum in engineering technology accredited by ECPD at the associate level.
(1) Estimated by EMC.
(2) Includes Lafayette, Calumet, Fort Wayne, and North Central Campuses.
(3) Includes Manitowoc and Milwaukee schools.

TABLE 32

ENGINEERING TECHNOLOGY BACHELOR'S DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																										
Alabama A&M U						1	16	5	1	8										31	6	27	0	0	0	4
ARIZONA																										
Arizona St U										1										7						
#DeVry Inst of Tech										60			6							66	0	0	0	1	0	0
Northern Arizona U						6		5	15			1				1				28						
CALIFORNIA																										
Cal St Poly U-Pomona	4					5				25			14			6				54	0	1	4	0	0	4
#Cal St Poly U-San Luis Ob		10								60			5			26			3	104	0					3
Cogswell Poly Coll						3										1				4	0	0	0	1	0	1
Northrop Inst of Tech	69																			69	0	2	4	4	0	11
COLORADO																										
#So. Colorado St Coll						5				14					1	6				26						
FLORIDA																										
#Embry-Riddle Aero U	7																			7						3
#Florida A&M U						7	4			6										17	0	17				
Florida Tech U																			1	1						
U of South Florida											27									27	1	2	2			
GEORGIA																										
Savannah St Coll						2				16						4				22		10				
Southern Tech Inst			40			51			64			76				42			14	287	1	0	0	0	0	7
ILLINOIS																										
#Bradley U						21			43							46				110	0	3	0	0	0	0
DeVry Inst of Tech									188											188	0	18	1			19
Industrial Eng Coll												23								23	1	0	2	1	0	7
Southern Ill U-Carbondale						26			36							14				76		2				2
Southern Ill U-Edwardsville																			1	1	0	0				0
INDIANA																										
Indiana Inst of Tech									4											4	0	0	0	0	0	1
#Indiana U-Purdue U									30			8				22				60						
#Purdue U (Note 1)						56			77			7				53				193	0	2	1	0	0	0
KENTUCKY																										
#Western Kentucky U						11			8							5			4	28		1				
LOUISIANA																										
Louisiana Tech U						6														6						
Northwestern St U of La										25										25	0	0	0	0	0	0
MAINE																										
U of Maine																			1	1						
MARYLAND																										
#Capitol Inst of Tech										68										68	0	0	0	0	0	0
MASSACHUSETTS																										
Central New England Coll											37									37	1	0	0	0	0	5
#Lowell Tech Inst					5	11				34						3				53						
#Northeastern U, Lincoln Col						10			28							19				57	0					0
#Southeastern Mass U						10			24							15				49	0	0	0	0	0	0
Wentworth Coll of Tech			12			22				39						39			23	135	0	3	1	7	0	4
MICHIGAN																										
Lake Superior St Coll										10						17				27	0	0	0	0	1	0
MINNESOTA																										
St. Cloud St Coll												27							18	45	2					2
Southwest Minn St Coll								3		7						16				26	0	0	0	0	0	0
MISSISSIPPI																										
Miss.St U-Inst of Eng Tech										9				11						20	0	0	0	0	0	0
MISSOURI																										
#Missouri Inst of Tech										30										30	0	1	0	0	0	1
Missouri Western St Coll						6				5										11	0	0	0	1	0	0
MONTANA																										
Montana St U						23										13				36						
NEBRASKA																										
U of Nebraska-Omaha						1		10		6		2								19	0	0	0	19	0	0
NEW MEXICO																										
New Mexico St U											19									19			6			
NEW YORK																										
City Coll of CUNY									89											89	0	8	8	15	0	0
N.Y. Inst of Tech									33		7					41				81						
Rochester Inst of Tech									72							61				133	0	0	0	1		1
SUNY Coll at Buffalo									13							2				15	0	0	0	0	0	0
NORTH CAROLINA																										
U of NC at Charlotte						16	18									11				45	0	0	0	0	0	2
OHIO																										
Cleveland St U											32									32						
Franklin U											24									24	0	1	0	0	0	0
Miami U										20			20		9					49	0	5				
Ohio Inst of Tech										41										41						
U of Akron Com & Tech Coll										37						22				59		3	1			1
#U of Dayton Eng Tech Div											103									103		2				4
OKLAHOMA																										
Oklahoma St U-Stillwater	27					9		13		32	10				5	23	6	8		133	7	1	0	0	1	3
OREGON																										
#Oregon Inst of Tech						46	17	2		41						23				129	0	0	0	0	0	2

TABLE 32 (Cont.)

ENGINEERING TECHNOLOGY
BACHELOR'S DEGREE

	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
OREGON (CONT.)																										
#Oregon St U						40			8				8			18		6	5	85	1	1	0	1	0	1
PENNSYLVANIA																										
Gannon Coll											8									8						
Pennsylvania St U						67			70							40				177	0					
Point Park Coll										15						14				29						
Spring Garden Coll						21				46						56				123	2	3	1			4
Temple U			10			14			24							18			2	68	0	6	6	1	0	2
SOUTH DAKOTA																										
U of S.D.-Springfield										4										4	0	0	0	0	0	0
TENNESSEE																										
East Tennessee St U												88								88	0	0	0	0	0	1
Memphis St U			8			14		6		10			25						5	68	3	3	0	0	0	1
U of Tennessee-Martin						6			7							9				22						
TEXAS																										
#DeVry Inst of Tech										5										5						
LeTourneau Coll									10							23			4	37	0	0	0	0	1	0
Texas A&M U						6	11	3		11						13			1	45	1	3				2
Texas Tech U						2			6							10				18	0	1	0	0	0	0
#U of Houston						33		16	17	73			15			11				164	15					
UTAH																										
#Brigham Young U								25		20			30							75	0	0	0	0	0	2
#Weber St Coll				12						27		3	20							62	1					
VIRGINIA																										
Old Dominion U								9		10						5				24	0	0	0	0	0	1
WEST VIRGINIA																										
Bluefield St Coll			3			3			3	1						1				12						
Fairmont St Coll				12				15		44		14				73			29	187		1				
WISCONSIN																										
#Milwaukee Sch of Engr									36							33				69	0	4	0	0	0	4
Total U.S.	107	10	73	24	5	560	66	112	906	860	267	249	165	11	15	855	6	14	115	4402	42	251	41	52	31	104

ENGINEERING TECHNOLOGY
POST-BACCALAUREATE DEGREE

TABLE 33

LOUISIANA																										
Northwestern St U of La										5										5	0	0	0	0	0	3
TENNESSEE																										
East Tennessee St U												4								4						
Memphis St U											11									11	0	1	0	0	0	1
TEXAS																										
Texas A&M U							1													1						
Total U.S.	0	0	0	0	0	1	0	0	0	5	11	4	0	0	0	0	0	0	0	21	0	1	0	0	0	4

TABLE 34

INDUSTRIAL TECHNOLOGY 2 YEAR CERTIFICATE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																											
Alabama Inst Aviation Tech	31									19											50		3				
Bessemer St Tech Coll		11		10			1	3	2	4											31	0	5	0	0	0	0
John C. Calhoun St Tech Sch		7		5				13	19										34		78	0	12	0	0	0	0
Ed E. Reid St Voc Tech Sch		7		12					5	16											40	0	14	0	0	1	0
ARIZONA																											
Phoenix Coll								8													8	1	2	1			
ARKANSAS																											
Westark Comm Coll				2									2								4						
CALIFORNIA																											
Chabot Coll				5				4		15					10			2	3		39	0	1	14	1	1	0
Coll of the Desert			1	2						3									2		8			4			
Coll of the Redwoods				2				6											6		14	0	0	0	0	0	0
Contra Costa Comm Coll				3				11	2	4		8			3						31		3	4	2	1	
San Diego Mesa Coll						1															1						
Santa Monica Coll				10		4		1		1			10						18		44						
Sierra Coll			2	3		2		2		6						2			4		21	4					
Victor Valley Comm Coll	5			15	1				8												29	0	1	2	1	0	1
COLORADO																											
Colo. Mt. Coll-E Campus				1					1						1						3	0	0	1	0	0	0
Lamar Comm Coll										1											1	0	0	1	0	0	0
CONNECTICUT																											
S.I. Ward Tech Coll										20											20	0	1	1	0	0	0
FLORIDA																											
Daytona Beach Comm Coll				21						23											44	0	6	0	0	0	0
Okaloosa-Walton Jr Coll		20		25						10											55	2	8	2	0	0	0
GEORGIA																											
Griffin-Spalding Cty AVT Sch										6											6						
North Georgia Tech		16		22						33						35					106		4				
Walker County Tech Sch		20		25				20		7											72	0	0	0	0	0	0
IDAHO																											
Idaho St U Sch Voc-Tech Ed	6			82		14	18	23	12	38			12		12				41		258	17					
ILLINOIS																											
Coll of DuPage (#)		30				1	1														32						
Inst of Aviation,U of Ill	16																				16	0	0	0	0	0	0
Lewis Coll	32																				32	0	0	0	0	0	0
Olive-Harvey Coll (#)						1	6			47									10		64	1	42	3	1	0	0
Thornton Comm Coll										1											1	0	0	0	0	0	0
IOWA																											
Indian Hills Comm Coll				4				4													8	0	0	0	0	0	0
Iowa Western Comm Coll	4						1														5	0	0	0	0	0	0
KANSAS																											
Kansas St Coll-Pittsburgh				1				1													2						
Kansas Tech Inst	8																				8						
KENTUCKY																											
Hazard Area Voc-Tech Sch						6															6						
Paducah Voc-Educ Center										1											1						
LOUISIANA																											
T.H. Harris Voc-Tech Sch						17				14									9		40						
MAINE																											
Eastern Maine V-T Inst				7																	7	0	0	0	0	0	0
Southern Maine V-T Inst		19		25		15			13	16				21		11			5		115	0	1	0	0	0	0
MARYLAND																											
Anne Arundel Comm Coll										4											4						
Catonsville Comm Coll							9														9	2					
MASSACHUSETTS																											
Blue Hills Reg Tech Inst						2															2	0	0	0	0	0	0
Franklin Inst Boston				65																	65	0	0	1	0	0	3
Northeast Inst of Ind Tech		174						42	34	73											323	0	12	4	3	2	9
Wentworth Inst	13		17			14		7		12											63	0	2	1	4	1	1
Weymouth Voc Tech HS								7													7						
Worcester Ind Tech Inst							27	18	9	13					2	10			19		98	9	0	0	0	0	0
MICHIGAN																											
Electronics Inst of Tech								5		43											48	1	30	2	0	0	2
Kellogg Comm Coll				2					1				2								5						
MINNESOTA																											
Austin Area Voc Tech Inst				15			10		10	20											55	8	0	4	0	3	4
Dunwoody Indust. Inst		9	58			9	13	39		37											165	0	0	0	0	1	3
Hibbing Area Voc Tech Inst				14			9		15	13						12					63						
Mankato Area Voc Tech Inst						20															20						
Minneapolis V-T Inst	14		8						29	11											82	0	3	1	1	0	0
St. Cloud Area V-T Inst			23	26			6	22	20	26									11		134						
Staples Area Voc Tech Inst								10													10	0	0	0	0	0	1
Winona Area Tech Inst	14		9	21				13		16					13						86						
MISSISSIPPI																											
Holmes Jr Coll								5				3									8	1	2				
Jones County Jr Coll		10		18						4											32	0	6	0	0	0	0
MISSOURI																											
Franklin Tech Sch		15		12						3			20								50	1	3	0	0	1	0
Meramec Comm Coll	8							25		18									22		73	0	0	0	0	0	0

TABLE 34 (Cont.)

INDUSTRIAL TECHNOLOGY 2 YEAR CERTIFICATE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	GENERAL	INDUSTRIAL	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY	STUDENTS COMPLETING PRE-ENGINEERING PROGRAM	TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
MONTANA																											
Miles Comm Coll				2																	2	0	0	0	0	0	0
NEBRASKA																											
Nebraska Tech Coll		9	6	33		10	5		12	20			24		13						132						
NEVADA																											
Clark Cty Eve Adult Ctr	5	4																			9				1		
NEW JERSEY																											
Cape May Cty Voc Tech Ctr				3				4		4				1							12						
Middlesex County Coll					6																6	4					
Ryder Tech Inst								31		28											59	0	4	1	0	0	0
Somerset County Tech Inst		15	16					4		8											43	0	1	1	0	0	0
NEW YORK																											
Paul Smith's Coll												92									92	0	0	0	0	0	0
Ulster Comm Coll								4													4	1					
NORTH CAROLINA																											
Pitt Tech Inst				7																	7		4				
Sandhills Comm Coll				6																	6	0	3	0	0	1	0
NORTH DAKOTA																											
Lake Region Jr Coll			6	17		9															32	0	0	0	0	2	0
OHIO																											
Cuyahoga Comm Coll												2									2	0	1	0	0	0	0
Youngstown Coll			7													8					15	2	0	0	0	0	0
OKLAHOMA																											
NE Okla A&M Coll				23			11					1				4					39						
Okla. St Tech, Okmulgee				284		54			52	36						7					433	0	56	0	0	97	2
OREGON																											
Clatsop Comm Coll				4			1	2		8				12							27	2	0	0	0	0	0
Portland Comm Coll	73			90						18			9		1				15		206						
PENNSYLVANIA																											
Dean Inst of Tech								17	10						1						28	0	1	3	0	0	0
Indust. Management Inst								23													23	2					
Lehigh County Comm Coll								1													1	0	0	0	0	0	0
Upper Bucks Cty Tech Sch	8			11	7		22	6	9												63	16					
SOUTH CAROLINA																											
Columbia Tech Educ Ctr								4		2											6		5				
Denmark Tech Educ Ctr										7											7	0	7	0	0	0	0
Midlands Tech Educ Ctr													7								7	0	2	0	0	0	0
SOUTH DAKOTA																											
Lake Area Voc Tech Sch	9			29				16		14			12						18		98						
TENNESSEE										15						14					29						
Area Tech Sch, Clarksville									3	1									1		13	0	1	0	0	0	0
Bristol-Sullivan Tech Sch				8																							
St Tech Inst-Memphis (#)			11				2		1	13						4			3		34	0	10	0	0	0	0
TEXAS																											
DeVry Inst of Tech										50											50						
San Jacinto Coll	28	13				5	58	16		44									114		278						
South Plains Coll				16						16									19		51	0	2	4	0	1	0
Southwest Texas Jr Coll				15																	15	0	0	6	0	0	0
UTAH																											
Southern Utah St Coll				1				4								8			32		45	20					
Utah St U	22							4													26	1					1
VIRGINIA																											
Blue Ridge Comm Coll										3											3	0	0	0	0	0	0
Va. Highland Comm Coll								1													1						
Va. Western Comm Coll				18																	18						
WASHINGTON																											
L.H. Bates Voc-Tech Inst			9			11		16	4	12						5			19		57						
Peninsula Coll				12										14					19		45	0	0	0	0	6	0
J.M. Perry Inst		7		11					16	19									16		69	0	0	6	1	0	0
Seattle Central Comm Coll				8				3											12		23	2	5	1	1		
Skagit Valley Coll																1					1						
WEST VIRGINIA																											
Mineral Cty Voc Tech Ctr		5		16				3		12						21			20		77						
WISCONSIN																8											
Indianhead Tech Inst			19											13		12			12		27	3	0	0	0	0	0
North Central Tech Inst										13					19						37	0	0	0	0	0	0
Waukesha County Tech Inst								1				11									32	0	0	0	0	0	0
Western Wis. Tech Inst																					12						
TOTAL U.S.	316	391	192	1069	14	195	200	449	287	911	0	117	111	48	83	134	0	2	465	0	5004	962	263	69	15	118	23

(#) Some certificates reported for these schools are less than 2-year programs.

TABLE 35

INDUSTRIAL TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	INDUSTRIAL TECHNOLOGY	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY		TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
ARIZONA																										
Eastern Arizona Coll				6						18										6			2		1	
Glendale Comm Coll							6	19												43	0	1	4	0	0	1
Pima Comm Coll		9		3			5	6		10		1								34	3	1				
ARKANSAS																										
Westark Comm Coll				1			1	5		6										13						
CALIFORNIA																										
Allan Hancock Coll				5						1	7				2					15	0					
American River Coll				11			8	15	23	32				2						91	0					0
Bakersfield Coll			2	15						5										22						
Chabot Coll				4		6		8		19				2	5			5		49	0	0	7	2	1	0
City Coll of San Fran.			2			9		4	6	6					4					31						
Contra Costa Comm Coll			10	13	6				6	15	5							4		59	2	4	3	1		2
Coll of the Desert			1	3						2										6			3			
Coll of Marin										21										21	2	0	2	0	0	0
Coll of the Redwoods			1	4		2	1	6		7	2							5		29	1	0	0	0	0	0
Cosumnes River Coll				10				5												15	3	2	3	0	0	0
El Camino Coll		18	4	4				14		39				13						92						
Golden West Coll			2	6				2												10						
National Tech Schools				96			8			36										140	0	12	14	5	0	21
Ohlone Jr Coll	5						12	2												19	2	1	3	1	0	0
Los Angeles Pierce Coll			18	15			11	6		7	2							21		80						
San Diego Mesa Coll						4														4						
Santa Barbara City Coll				5			4		4	7			43							63	1		3			1
Santa Monica Coll				8														12		20						
Sierra Coll			5	1		3	2	9		4								5		29						
Taft Coll											1									1						
Ventura Coll				5						4	2	2						5		18						
COLORADO																										
Colorado Mtn. Coll E Campus								1		2				2						5	0	0	0	0	0	0
Comm Coll of Denver				14				21		9					5			19		68	3					
Lamar Comm Coll										4										4			0			
Southern Colorado St Coll				11			19													30						
FLORIDA																										
Chipola Jr Coll							1			1										2		1				
Florida Keys Comm Coll										6										6	0	0	1	0	0	
Massey Tech Inst								4		6										10						
Okaloosa-Walton Jr Coll		8					10	8		7										33	4	6	1	0	0	0
GEORGIA																										
Brunswick Jr Coll							24	18												42						
IDAHO																										
Boise St Coll								15		18										33	1	0	0	0	0	0
ILLINOIS																										
Belleville Area Coll	5						19	6		12										42	9					
Coll of DuPage		27	15			16	1			31				4	12					106						
Coll of Lake County			6				8													14	1	1	0	0	0	0
Highland Comm Coll				5						5										10	1	0	0	0	0	0
Joliet Jr Coll				6			17	7		7		2								39	8	0	0	0	0	0
Lake Land Coll						5		10		15										30	0	0	0	0	0	0
Parkland Coll				7			22	1										3		33	4		1	1		
Thornton Comm Coll										2					3			9		14	1	1	0	0	0	0
Triton Coll		7		13										1				6		27						
Waubonsee Comm Coll				7			4	2		6	1									20						
INDIANA																										
Indiana-Purdue U			20				64													84						
Purdue U (Note 1)	55				5		83	33			6									182	28	4	0	0	0	0
Tri-State Coll							15								21					36						
IOWA																										
Clinton Comm Coll								13		12										25	1					
Indian Hills Comm Coll				3																3						
Iowa Central Comm Coll										14										14	0	0	0	0	0	0
Iowa Western Comm Coll	22						9			20										51	2	0	0	0	0	0
Southwestern Comm Coll										10										10						
KANSAS																										
Hutchinson Comm Jr Coll				4			1	4	6	14	10				4					43						
Kansas Tech Inst	2																			2						
KENTUCKY																										
Eastern Kentucky U								16		9								3		28	0	3	0	0	0	0
LOUISIANA																										
Northwestern St U of La								5												5						
MAINE																										
Eastern Maine V-T Inst				3					8	21										32	0	0	0	0	0	0
MARYLAND																										
Allegany Comm Coll				3			1													4	0	0	0	0	0	0
Anne Arundel Comm Coll											1									1						
Catonsville Comm Coll					3		29											2		34	7	2				
MASSACHUSETTS																										
Blue Hills Reg Tech Inst						12			7	7										26	0	0	0	0	0	0
Greenfield Comm Coll											1									1		0	0	0	0	0
Springfield Tech Comm Coll				11		15	51	14	22	55					6			10		184	18	21	4	2	0	0

TABLE 35 (Cont.)

INDUSTRIAL TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	INDUSTRIAL TECHNOLOGY	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY		TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
MICHIGAN																										
Alpena Comm Coll					2	6		4		5										17	0	0	0	0	0	0
Delta Coll											4							3		6	0	0	0	0	0	0
Ferris State Coll		53	42	189	6	16		46	10	20		27								411						
Gogebic Comm Coll				2				9												8	0	0	0	0	0	0
Kellogg Comm Coll					1			9	9		1				7					25						
Lake Michigan Coll								6		7	4	2								19	0	1	0	0	0	0
Macomb Cty Comm Coll		22	16			16		38	34					3	30			34		193	0	3	1	0	0	0
Monroe County Comm Coll			4	3				7		7		4						6		31	5					
Northern Michigan U											6							1		7						
Oakland Comm Coll				1				14	2									9		26	0	1	1	0	0	0
SW Michigan Coll	17			9				8			3									37	0	2	0	0	0	0
MINNESOTA																										
North Hennepin Comm Coll			2																	2	0	0	0	0	0	0
Northwestern Elec Inst										87										87						
MISSISSIPPI																										
Holmes Jr Coll								5			3									8						
Jones Cty Jr Coll				3			14	2		11										30	0	0	0	0	0	0
Miss. Gulf Coast Jr Coll							4	8		7										19	1	2				
Utica Jr Coll								2		7										9		9				
MISSOURI																										
Central Missouri St U		2	3	1						1								1		8	2	0	0	0	0	0
Florissant Val. Comm Coll									6											6						
Forest Park Comm Coll				10						8								8		26	0					
Jefferson Coll				4				5							1					10						
Missouri Southern St Coll				6																6	0	0	0	0	0	0
Missouri Western St Coll							11													11						
Moberly Area Jr Coll				1			2			1										4	1	0	0	0	0	0
MONTANA																										
Miles Comm Coll				4						3										7	0	0	0	0	0	0
NEBRASKA																										
Nebraska Tech Coll		30	30	154		16	31		26	16	24	17		13				11		357	3	1				1
U of Neb. Sch of Tech Agr																				11	0	0	0	0	0	0
NEW HAMPSHIRE																										
N.H. V-T Coll Manchester		11		13				15	16	13	7				9					84	0	0	0	0	0	0
NEW JERSEY																										
County Coll of Morris					7															7	4					
Mercer Cty Comm Coll			6					11	3	24	6									50	2	4				
NEW YORK																										
Adirondack Comm Coll								9												9	0	0	0	0	0	0
Broome Comm Coll											25									25	1	0	0	0	0	0
Dutchess Comm Coll			8					12	19						12					51	2	1	0	0	0	2
Hudson Valley Comm Coll											10									10						
Monroe Comm Coll						24	35			39					35			6		139	11	2	1	0	0	0
Nassau Comm Coll						17				13	7									37						
N.Y.C. Comm Coll				13							32	3			7					46	1					
Niagara County Comm Coll									20						7					27		1				
Orange County Comm Coll			10						13						9					32	1					
Schenectady Cty Comm Coll											13									13						
SUNY Agr & Tec Col-Alfred								27		24										51	1	1				
Staten Island Comm Coll						17	5		42						17			32		113	18	15	6	1	0	2
NORTH CAROLINA																										
Cape Fear Tech Inst					3			17		21			73							114	9	5	2	0	0	0
Guilford Tech Inst	1						12													13	6					
Sandhills Comm Coll							7													7						
Tech Inst of Alamance		3			7															10	3	0	0	0	0	0
Wilkes Comm Coll				13		10					64									87		3				
OHIO																										
Cuyahoga Comm Coll											5									5	0	2	0	0	0	0
Lorain County Comm Coll					9															9	2					
Sinclair Comm Coll			4					9												13						
U of Akron Com & Tech Col											19									19	1			1		
OKLAHOMA																										
Cameron Coll							12													12	3					
NE Oklahoma A&M Coll				5			26	14		11					2			27		85						
OREGON																										
Chemeketa Comm Coll											9			8				25		42	1					
Mt. Hood Comm Coll																				40						
Oregon Inst of Tech				15				5		15								115		180	69	0	0	0	0	0
Portland Comm Coll				51							14									65						
SW Oregon Comm Coll	23			10		13									4			16		66						
PENNSYLVANIA				10							5									15	0	0	1	0	1	0
Dean Inst of Tech								86	53					10						149	3	3	5	0	0	0
Indust. Management Inst											5									5						
Lehigh Cty Comm Coll					8	19	18			17					26					88	12					1
Ryder Tech Inst								4		165										169	0	1				
SOUTH DAKOTA																										
U of S.D.-Springfield				53		16		8		8		3								88	0	0	0	0	3	0
TENNESSEE																										
Chattanooga St Tech Inst					6		20				14						10	4		54				0	0	0

TABLE 35 (Cont.)

INDUSTRIAL TECHNOLOGY ASSOCIATE DEGREE	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	INDUSTRIAL TECHNOLOGY	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY		TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
TENNESSEE (CONT.)																										
Tri-Cities Reg Voc Tech Sc					2															2						
TEXAS																										
Dallas Cty Comm Coll Dist		1																		1	0	0	0			
Del Mar Coll			6					2					3							11	0	0	2	0	0	0
Grayson County Coll				4			3			4								2		13	0	2	0	0	0	0
Howard County Jr Coll								1												1						
Kilgore Coll				4				22		14						8				48	0	5	0	0	0	0
Lee Coll	1	1		2			6	4	11	12	1	1						14		53	4	3	2	0	0	1
South Plains Coll							4	7												11	2	1	0	0	0	0
Tarrant County Jr Coll	11	22		20																53						
Temple Jr Coll		2					13													15	1	1	1	0	0	2
UTAH																										
Brigham Young U						5														5	0	0	0	0	0	0
Utah Tech Coll-Provo		7		9								2						4		22	0	0	0	0	0	0
VIRGINIA																										
Blue Ridge Comm Coll											1									1						
Central Virginia Comm Coll								2												2	0	0	0	0	0	0
Norfolk St Coll								2		5										7	1	5	1	0	0	0
Tidewater Comm Coll								12												12	0	2	0	0	0	0
Va. Highlands Comm Coll								7		11										18						
WASHINGTON																										
Clark Coll				3											2			2		7	0	0	0	0	0	0
Edmonds Comm Coll										12										12						
Highline Comm Coll											2									2	0	0	0	0	0	0
Seattle Central Comm Coll					4		18	6			6		1					2		35						
Shoreline Comm Coll					6			5			2		19							32						
Skagit Valley Coll															12					12						
Spokane Comm Coll	24			49			12	26		30	4									145						
Wenatchee Valley Coll		5		7																12						
Yakima Valley Coll			1	26			11			7					1					46	2	0	2	0	0	1
WEST VIRGINIA																										
Fairmont St Coll								4		4	4				8					20	0	0	0	0	0	0
WISCONSIN																										
Blackhawk Tech Inst										8										8	0	0	0	0	0	0
Gateway Tech Inst	25			15		6	1	20		6		17						12		102						
Lakeshore Tech Inst								14	6	10								8		38	0	0	1	0	0	0
Milwaukee Area Tech Coll											7				8					15	0		0			0
North Central Tech Inst			28	13						23					9					73	1	0	0	0	0	0
Waukesha County Tech Inst								6		20								7		33	0	0	0	0	0	0
WYOMING																										
Casper Coll				4			7	7												18	5	0	0	0	0	0
TOTAL U.S.	191	228	251	1028	77	253	708	801	352	1229	345	81	143	58	261	9	10	439	-	6481	278	165	76	18	9	43

Note 1: Includes Lafayette, Calumet, Fort Wayne, and North Central campuses.

TABLE 36

INDUSTRIAL TECHNOLOGY POST-BACCALAUREATE DEGREE																										
KANSAS																										
Kansas St Coll-Pittsburgh																		21		21	1	2				1
KENTUCKY																										
Eastern Kentucky U											1									1						
MISSOURI																										
Central Missouri St U								4		1					2			1		8	0	0	1	0	0	2
TEXAS																										
Texas A&M U											3									3						
WISCONSIN																										
U of Wisconsin-Stout											6									6						
TOTAL U.S.	0	0	0	0	0	0	0	4	0	1	10	0	0	0	2	0	0	22	0	39	1	2	1	0	0	5

TABLE 37

INDUSTRIAL TECHNOLOGY
BACHELOR'S DEGREE

	AIRCRAFT	AIR CONDITIONING	ARCHITECTURAL	AUTOMOTIVE	CHEMICAL	CIVIL	COMPUTER	DRAFTING AND DESIGN	ELECTRICAL	ELECTRONIC	INDUSTRIAL TECHNOLOGY	MANUFACTURING	MARINE	MATERIALS, METALS	MECHANICAL	MINERAL	NUCLEAR	OTHER TECHNOLOGY		TOTAL TECHNOLOGY	WOMEN	NEGROES	SPANISH SURNAMES	ORIENTALS	AMERICAN INDIANS	FOREIGN NATIONALS
ALABAMA																										
Alabama A&M U											1									1	0	1	0	0	0	0
ARIZONA																										
Arizona St U	37							22		59	3							1		122						
CALIFORNIA																										
Cal. St Poly U San Luis Ob											76									76	0					1
COLORADO																										
So. Colorado St. Coll				16								4								20						
GEORGIA																										
Georgia Southern Coll												17						19		36	0	0	2	0	0	0
ILLINOIS																										
Eastern Illinois U			6							11				5						22	0	0	0	0	0	4
Southern Ill. U-Carbondale											97									97			2			
INDIANA																										
Indiana-Purdue U							31				13									44						
Purdue U (Note 1)	27						3				106									136	0	2	1	0	0	0
KANSAS																										
Kansas St Coll-Pittsburgh				62		76		16		19	1	6						26		206	3	4			2	6
Kansas St Teachers Coll											4									4	0	0	0	0	0	0
KENTUCKY																										
Eastern Kentucky U											45									45	0	0	0	0	0	1
Western Kentucky U											29									29						
LOUISIANA																										
Louisiana St U-Baton Rouge											35									35						
Northwestern St U of La.								1			26	4								31						
SE Louisiana U											29									29	0	0	0	0	0	0
Southern U		4								21								7		32	1	32	0	0	0	0
U of Southwestern La.											19									19	0	0	0	0	0	0
MASSACHUSETTS																										
Central New England Coll											8									8	0	0	0	0	0	1
MICHIGAN																										
Central Michigan U											11									11						
Northern Michigan U				14				12	6		18			11				17		78						
MINNESOTA																										
Mankato St Coll											12									12						
MISSISSIPPI																										
Mississippi St U											37									37	0	0	0	0	0	0
MISSOURI																										
Central Missouri St U	14							17	7	6	7					3		13		67	0	0	0	0	0	2
Missouri Western St Coll							14													14						
Southeast Missouri St U											13									13						
NEBRASKA																										
Kearney St Coll											8									8	0	0	0	0	0	0
U of Nebraska-Omaha											5									5	0	0	0	0	0	0
NEW YORK																										
SUNY Coll at Buffalo											113									113	0	0	0	0	0	3
NORTH CAROLINA																										
NC Agr & Tech St U				4		2				20		9								35	0	35	0	0	0	0
OHIO																										
Ohio U											59									59						
OREGON																										
Oregon Inst of Tech				36														31		67	20	0	0	0	0	0
TENNESSEE																										
Austin Peay St U																		1		1						
Tennessee Tech U											57									57	0	0	0	0	0	2
TEXAS																										
Texas A&M U											76									76	1	3	0	0	0	2
UTAH																										
Brigham Young U							13													13	0	0	0	0	0	2
Utah St U	38			13														4		55			1			2
VIRGINIA																										
Norfolk St Coll										4								5		9	0	8	0	0	0	0
WASHINGTON																										
Central Wash St Coll											33									33	0	0	0	2	3	0
Western Wash St Coll											48									48	3				1	
WEST VIRGINIA																										
Fairmont St Coll								2		8	5				12					27	0	0	0	0	0	0
WISCONSIN																										
U of Wisconsin-Platteville											73									73						
U of Wisconsin-Stout											163									163						
TOTAL U.S.	116	4	6	145	0	91	48	70	13	148	1240	40	0	16	15	0	0	124	-	2076	28	85	6	2	6	26

NOTE 1: Purdue U. includes Lafayette, Calumet, Fort Wayne, and North Central campuses.

OTHER TECHNOLOGY CURRICULA

SCHOOL	CURRICULUM	ENG. TECH.		INDUST. TECH.			
		AS	BS	CT	AS	BS	MS
Alexander City Jr Coll AL	Not specified	8	-	-	-	-	-
J.C. Calhoun St Tech Sch AL	" "	-	-	34	-	-	-
Arizona St U	Tech Educ T	-	-	-	-	1	-
E. Arizona Coll	Not specified	4	-	-	-	-	-
Calif. St Poly Coll SLO	Welding	-	3	-	-	-	-
Chabot Coll CA	Not specified	-	-	3	5	-	-
Coll of the Desert CA	" "	-	-	2	-	-	-
Coll of the Redwoods CA	" "	-	-	6	5	-	-
Contra Costa Coll CA	Welding	-	-	-	4	-	-
Grossmont Coll CA	Tech & Sci Illustr.	10	-	-	-	-	-
" "	Bio-Medical T	32	-	-	-	-	-
Los Angeles Pierce Coll CA	Not specified	-	-	-	21	-	-
Riverside City Coll CA	Plumbing	1	-	-	-	-	-
" " "	Str. Insp.	1	-	-	-	-	-
San Joaquin Delta Coll CA	Electron Microscopy	6	-	-	-	-	-
Santa Monica Coll CA	Not specified	-	-	18	12	-	-
Shasta Coll CA	" "	6	-	-	-	-	-
Sierra Coll CA	" "	-	-	4	5	-	-
Ventura Coll CA	Welding	-	-	-	5	-	-
Victor Valley Comm Coll CA	Not specified	4	-	-	-	-	-
Colo. Electronic Tech Coll	Biomedical ET	12	-	-	-	-	-
Comm Coll of Denver CO	Not specified	-	-	-	19	-	-
Brevard Comm Coll FL	Ecology	10	-	-	-	-	-
" " "	Quality Control ET	5	-	-	-	-	-
" " "	Tech Writing	2	-	-	-	-	-
Florida Tech U	Environ. Control	-	1	-	-	-	-
Miami-Dade Comm Coll FL	Not specified	24	-	-	-	-	-
St. Johns River Jr Coll FL	Environmental Sci.	1	-	-	-	-	-
Georgia Southern Coll	Not specified	-	-	-	-	19	-
Southern Tech Inst GA	Apparel	9	5	-	-	-	-
" "	Textile	6	9	-	-	-	-
Idaho St U	Not specified	-	-	41	-	-	-
Illinois Eastern Jr Coll	" "	5	-	-	-	-	-
Olive-Harvey Coll IL	" "	-	-	10	-	-	-
Parkland Coll IL	Micro-precision T	6	-	-	-	-	-
" "	Not specified	-	-	-	3	-	-
So. Ill. U Edwardsville	Sanitation	-	1	-	-	-	-
Thornton Comm Coll IL	Not specified	13	-	-	9	-	-
Triton Coll IL	" "	-	-	-	6	-	-
W.R. Harper Coll IL	Numerical Control	5	-	-	-	-	-
Kansas St Coll Pittsburg	Plastics T	-	-	-	-	1	21
" "	Printing T	-	-	-	-	13	-
" "	Wood Utilization T	-	-	-	-	12	-
Eastern Kentucky U	Not specified	-	-	-	3	-	-
Western Kentucky U	Environmental	-	4	-	-	-	-
Southern U LA	Not specified	-	-	-	-	7	-
T.H. Harris VT Sch LA	Nondest. Test. T	-	-	9	-	-	-
So. Maine VT Inst	Fire T	1	-	5	-	-	-
U of Maine	Pulp & Paper	5	7	-	-	-	-
Catonsville Comm Coll MD	Quality Control	-	-	-	2	-	-
Lowell Tech Inst MA	Plastics	2	-	-	-	-	-
Quinsigamond Comm Coll MA	Environmental T	2	-	-	-	-	-
Springfield Tech Comm Coll MA	Heat & Power	-	-	-	10	-	-
Wentworth Coll MA	Not specified	-	23	-	-	-	-
Worcester Ind. Tech Inst MA	" "	-	-	19	-	-	-
Delta Coll MI	Residential T	4	-	-	-	-	-
" "	Not specified	-	-	-	2	-	-
Macomb Co. Comm Coll MI	" "	-	-	-	34	-	-
Monroe Co. Comm Coll MI	" "	-	-	-	6	-	-
Muskegon Comm Coll MI	" "	20	-	-	-	-	-
No. Michigan U	" "	-	-	-	1	17	-
Oakland Comm Coll MI	" "	-	-	-	9	-	-
St Cloud Area VT Inst MN	" "	-	-	11	-	-	-
St Cloud St Coll MN	Photo ET	2	18	-	-	-	-
Central Missouri St U	Not specified	-	-	-	1	13	1
Forest Park Comm Coll MO	Fire Prot. T	-	-	-	8	-	-
Meramec Comm Coll MO	Tech Illust.	-	-	22	-	-	-
U of Nebr. Sch Tech Agr.	Not specified	-	-	-	11	-	-

OTHER TECHNOLOGY CURRICULA (Cont.)

SCHOOL	CURRICULUM	ENG. TECH. AS	ENG. TECH. BS	INDUST. TECH. CT	INDUST. TECH. AS	INDUST. TECH. BS	INDUST. TECH. MS
Salem Comm Coll NJ	Not specified	5	-	-	-	-	-
Hudson Valley Comm Coll NY	Environmental	14	-	-	-	-	-
Monroe Comm Coll NY	Biomedical ET	8	-	-	-	-	-
" "	Instrumentation T	-	-	-	6	-	-
NY City Comm Coll	Environ. Sci. T	20	-	-	-	-	-
Staten Is. Comm Coll NY	Science Lab T	-	-	-	32	-	-
SUNY A&T Coll Delhi	Agricultural ET	3	-	-	-	-	-
SUNY A&T Coll Farmi ..le	Photographic T	37	-	-	-	-	-
Fayetteville Tech ..st NC	Environmental ET	8	-	-	-	-	-
Hocking Tech Coll OH	Ceramic	9	-	-	-	-	-
Sinclair Comm Coll OH	Fire Science T	3	-	-	-	-	-
U of Akron OH	Not specified	1	-	-	-	-	-
U of Toledo OH	Water Qual. Cont.	3	-	-	-	-	-
Northeast. Okla. A&M Coll	Not specified	-	-	-	27	-	-
Okla. St U Stillwater	Fire Prot. & Safety	7	-	-	-	-	-
Chemeketa Comm Coll OR	Not specified	-	-	-	25	-	-
Oregon Inst of Tech	" "	-	-	-	115	31	-
Oregon St U	" "	-	5	-	-	-	-
Portland Comm Coll OR	Tech Illustration	3	-	-	3	-	-
" "	Adv. Supv. Devel.	-	-	15	-	-	-
" "	Supv. Devel.	-	-	-	10	-	-
" "	Welding	-	-	-	3	-	-
Comm Coll Allegheny Co. PA	Research E	2	-	-	-	-	-
Pennsylvania St U	Air Poll. Cont. ET	6	-	-	-	-	-
Temple U PA	Environmental ET	9	-	-	-	-	-
"	Biomedical ET	-	2	-	-	-	-
Sumter Area TEC SC	Environmental ET	9	-	-	-	-	-
Lake Area VT Sch SD	Agricultural	-	-	18	-	-	-
Austin Peay St U TN	Not specified	-	-	-	-	1	-
Bristol-Sullivan Tech Sch TN	" "	-	-	1	-	-	-
Chattanooga St Tech Inst TN	Instrumentation	1	-	-	-	-	-
" "	Air Pollution T	-	-	-	4	-	-
Memphis St U TN	Forest Products	-	4	-	-	-	-
" "	Indust. Safety	-	1	-	-	-	-
St Tech Inst at Memphis TN	Instrumentation	3	-	3	-	-	-
Grayson Co. Coll TX	Not specified	-	-	-	2	-	-
Lee Coll TX	Welding	-	-	-	4	-	-
" "	Offset Printing	-	-	-	4	-	-
" "	Instrumentation	-	-	-	2	-	-
" "	Mid. Management	-	-	-	6	-	-
LeTourneau Coll TX	Welding	-	4	-	-	-	-
San Jacinto Coll TX	Not specified	-	-	114	-	-	-
South Plains Coll TX	" "	-	-	19	-	-	-
Texas A&M U	Safety	-	2	-	-	-	-
" "	Welding Met.	-	1	-	-	-	-
Inst for Tech Training UT	Not specified	2	-	-	-	-	-
Southern Utah St Coll	" "	-	-	32	-	-	-
Utah St U	Welding	-	-	-	-	4	-
Utah Tech Coll Provo	Not specified	4	-	-	4	-	-
Norfolk St Coll VA	" "	-	-	-	-	5	-
Va. Commonwealth U	" "	1	-	-	-	-	-
Wytheville Comm Coll VA	" "	9	-	-	-	-	-
Clark Coll WA	Welding	-	-	-	2	-	-
Peninsula Coll WA	Not specified	-	-	19	-	-	-
J.H. Perry Inst WA	" "	-	-	16	-	-	-
Seattle Central Comm Coll WA	Photography T	-	-	3	1	-	-
" " "	Printing & Litho. T	-	-	9	1	-	-
Fairmont St Coll WV	Not specified	7	29	-	-	-	-
Mineral Co. VT Ctr. WV	" "	-	-	20	-	-	-
Gateway Tech Inst WI	" "	-	-	-	12	-	-
Lakeshore Tech Inst WI	Plastics	-	-	-	8	-	-
Milwaukee Area Tech Coll WI	Photo-Instrumentation	8	-	-	-	-	-
North Central Tech Inst WI	Printing	-	-	12	-	-	-
Waukesha Co. Tech Inst WI	Not specified	-	-	-	7	-	-
West. Wisconsin Tech Inst	Biomed. Electronics	14	-	-	-	-	-
" " "	Printing & Publ.	7	-	-	-	-	-
Puerto Rico Tech Inst	Environ. Control T	14	-	-	-	-	-
" " "	Instrumentation	10	-	-	-	-	-

Membership of the
ENGINEERS JOINT COUNCIL

MEMBER SOCIETIES

ASCE	American Society of Civil Engineers
AIME	American Institute of Mining, Metallurgical, and Petroleum Engineers
ASME	American Society of Mechanical Engineers
ASAE	American Society of Agricultural Engineers
ASM	American Society for Metals
SME	Society of Manufacturing Engineers
SESA	Society for Experimental Stress Analysis
ISA	Instrument Society of America
ASQC	American Society for Quality Control
AIIE	American Institute of Industrial Engineers
SFPE	Society of Fire Protection Engineers
AIPE	American Institute of Plant Engineers
AACE	American Association of Cost Engineers
AIChE	American Institute of Chemical Engineers

ASSOCIATE SOCIETIES

APCA	Air Pollution Control Association
NICE	National Institute of Ceramic Engineers
ASNT	American Society for Nondestructive Testing
SPHE	Society of Packaging and Handling Engineers
IMMS	International Material Management Society
SWE	Society of Women Engineers
SHOT	Society for the History of Technology
WSE	Western Society of Engineers
LES	Louisiana Engineering Society
WSE-D. C.	Washington Society of Engineers
ESNE	Engineering Societies of New England
SCSE	South Carolina Society of Engineers
LACES	Los Angeles Council of Engineers and Scientists
HEC	Hartford Engineers Club
IMMS/NJ	International Material Management Society (New Jersey Chapter)
CES	Cleveland Engineering Society
SAME	Society of American Military Engineers
SAWE	Society of Allied Weight Engineers
ACI	American Concrete Institute
DEC	Danville Engineers Club
GAES	Gas Appliance Engineers Society
ACEC	American Consulting Engineering Council
NACE	National Association of Corrosion Engineers

210—73

Price: $15.00